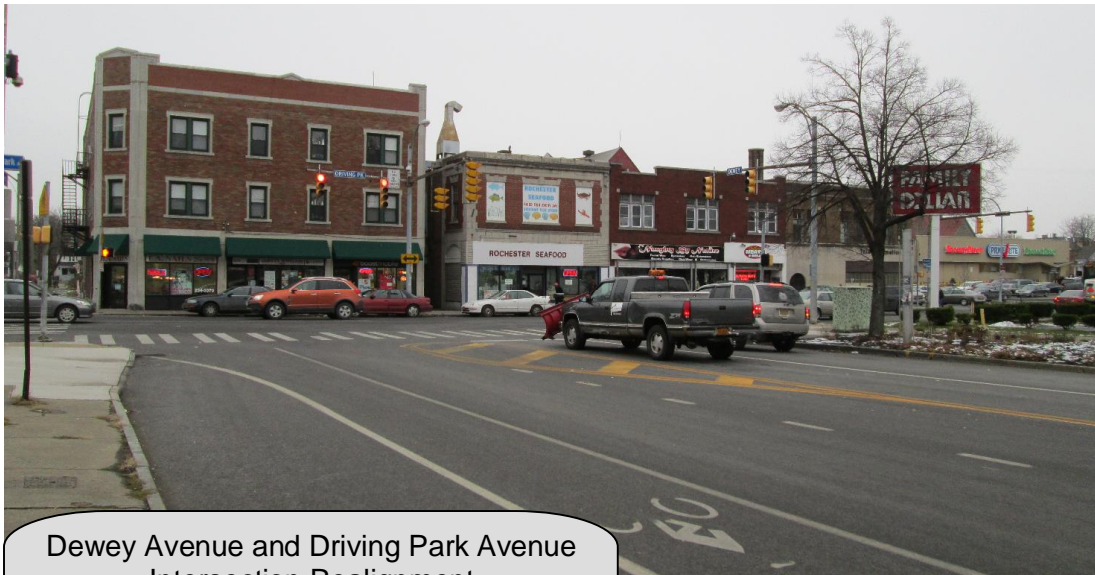


TRANSPORTATION

FINAL DESIGN REPORT

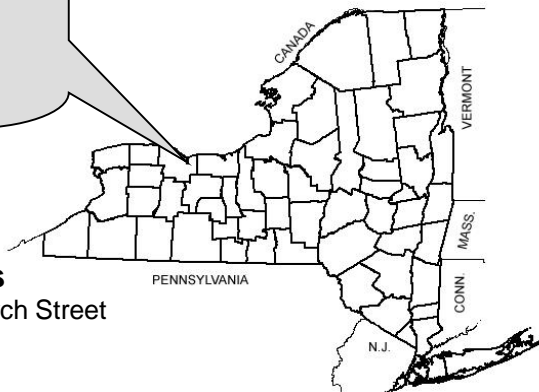
August 2014



Dewey Avenue and Driving Park Avenue
Intersection Realignment
P.I.N. 4755.55
City of Rochester
Monroe County, NY



**City of Rochester
Department of
Environmental Services**
City Hall Room 300B, 30 Church Street
Rochester, NY 14614-1290



U.S. Department of Transportation Federal Highway Administration

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
ANDREW M. CUOMO, Governor JOAN McDONALD, Commissioner

PROJECT REPORT



Prepared By:

Bergmann
associates

28 East Main Street
200 First Federal Plaza
Rochester, NY 14614-1909
www.bergmannpc.com

Memorandum

Date: **August 19, 2014**

To: **Jeron Rogers, P.E.**

From: **Michael T. Croce, P.E.**

Signature: 

RE: **DESIGN APPROVAL REQUEST MEMORANDUM**

PIN 4755.55
DEWEY AVENUE / DRIVING PARK AVENUE
INTERSECTION REALIGNMENT
CITY OF ROCHESTER
MONROE COUNTY

1. LOCATION AND COST:

The proposed project would realign the intersection of Dewey Avenue and Driving Park Avenue in the City of Rochester. Project limits are within 200 feet south and 300 feet north of Driving Park Avenue on Dewey Avenue, and from Finch Street to Straub Street along Driving Park Avenue. Dewey Avenue is an urban minor arterial with uncontrolled access. Driving Park Avenue is an urban major collector with uncontrolled access. None of the roads are on the National Highway System. The City of Rochester would retain ownership and maintenance responsibility upon completion. The Engineer's Opinion of Probable Construction Cost is \$2,196,640 (please refer to Exhibit 1.5.-2 in the Final Design Report). Project construction is not yet funded but detailed design and Right of Way incidentals/acquisition are currently programmed on the Genesee Transportation Council (GTC) Transportation Improvement Plan (TIP). The project is funded with Highway Safety Improvement Program (HSIP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds.

2. ALTERNATE DESCRIPTION:

The project area and preferred alternative are described in Chapters 2 and 3 of the Final Design Report (attached). The preferred alternative is summarized in Chapter 1, in Section "1.3. What Alternative(s) Are Being Considered?." A summary of the design is given below.

The project involves the following improvements at the intersection of Dewey Avenue and Driving Park Avenue.

- Realign Dewey Avenue to eliminate the offset pair of intersections. The northern approach would be moved west to meet the south approach using a series of 25 miles per hour curves in an effort to minimize impacts to adjacent private properties.
- Install curb extensions to define parking areas on Dewey Avenue and Driving Park Avenue.
- Install a turning roadway to facilitate westbound to northbound turns
- Institute stop control on the westbound turning roadway approach to Dewey Avenue
- Replace existing sidewalk and curb ramps. Provide detectable warning surfaces at all crossing locations
- Install a new three color, actuated traffic signal at the consolidated intersection
- Relocate existing intelligent transportation system elements

- Install pedestrian signals with countdown timers, push buttons, and high visibility crosswalk markings at all signalized crosswalks
- Connect the existing northbound and southbound bicycle lanes along Dewey Avenue
- Install shared lane use markings on Driving Park Avenue within the project limits
- Improve pavement conditions via full depth reconstruction within the project limits
- Improve aesthetics with streetscape and landscape features, and provide an opportunity to develop a pocket park / community gathering space

3. STANDARDS AND DESIGN EXCEPTIONS:

The design is consistent with the standards listed in the NYSDOT Highway Design Manual (HDM), specifically chapters 2 and 18. It has also been developed in accordance with AASHTO's A Policy on Geometric Design of Highways and Streets, Guide for the Planning, Design, and Operation of Pedestrian Facilities, The Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities, and Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way. It complies with the National Manual on Uniform Traffic Control Devices for Streets and Highways and New York State Supplement (MUTCD).

The surrounding land use at the project location is mixed between urban residential and commercial. The existing City of Rochester speed limit for all roadways within the project limits is 30 mph. The design speed for these roadways is 35 mph, which is based upon HDM Chapter 2. The existing and anticipated operating speeds are consistent on approach to the intersection.

Several design exceptions apply to the design. These include horizontal curve radius, turn lane width, and stopping sight distance, all of which occur along Dewey Avenue. Justifications for the non-standard features are available in Section 3.3.3.2(1) and Appendix F of the attached report. This memorandum requests your approval of the listed non-standard features.

4. TRAFFIC CONTROL PLANS:

Conceptual work zone traffic control schemes would allow the contractor to initially utilize one-way alternating traffic with flagging control during the day while maintaining vehicular traffic through the intersection to accomplish underground utility and drainage work along with the initial stages of approach reconstruction. No long term, full intersection closures with a detour are anticipated. The contractor could also complete sections of curbing and pavement along the new alignment of Dewey Avenue outside the existing roadway. This would allow the contractor to complete that work without interference from adjacent traffic. Traffic could then be transferred to the new sections of roadway which would provide adequate room to work and reduce conflicts for the traveling public as the project is brought to completion.

Pedestrians would be accommodated within the project limits using existing, temporary, or new sidewalks. Bicyclists would continue to share the roadway with motor vehicles and be expected to follow posted work zone traffic control. Work zone traffic control would be coordinated with local officials, residents, utility owners, school districts, and local emergency service providers.

5. ENVIRONMENTAL DETERMINATIONS:

This project has been progressed as a SEQR Unlisted Action and a NEPA Class II, D-List, Categorical Exclusion. Therefore, the project required no further SEQR processing.

Memorandum


6. PROCEDURAL PROCESS AND QUALITY CONTROL STATEMENT:

The project has followed the project development process in accordance with the NYSDOT "Locally-Administered, Federal-Aid Procedures Manual." All requirements requisite to these actions and approvals have been met, independent quality control reviews have been accomplished, and the work is consistent with established standards, policies, regulations, and procedures, except as otherwise noted and explained in this memorandum.

7. REQUEST FOR APPROVAL:

Please indicate your approval of design by signing this memorandum.

I, THE UNDERSIGNED, APPROVE THE PREFERRED ALTERNATIVE AS DESCRIBED IN THE ATTACHED FINAL DESIGN REPORT.

APPROVED:  DATE: 8-19-2014
Jeron Rogers, P.E.
Manager of Special Projects, City of Rochester Department of Environmental Services

Cc: Frank DiCostanzo, P.E., Local Projects Liaison, NYSDOT Region 4
Theodora Finn, Sr. Community Housing Planner, City of Rochester
Peter Włodarczyk, P.E., Assistant Project Manager, Bergmann Associates
Thomas Detrie, P.E., Project Engineer, Bergmann Associates

PROJECT APPROVAL SHEET

(Pursuant to SAFETEA-LU Matrix)

A. IPP Approval:

The project cost and schedule are consistent with the Regional Capital Program.
The IPP was signed by:

Robert Traver9-17-13

Acting Regional Director, NYSDOT Region 4

**B. Recommendation for
Scoping & Design
Approval:**

The project cost and schedule are consistent with the Regional Capital Program.

**Environmental
Determination & Federal
Aid Process Concurrence:**

The NYSDOT on behalf of FHWA (based on the NEPA Checklist) concurs with the classification of this project as NEPA Class II, Categorical Exclusion, D-List as described in this document.


Dan Hallowell

Regional Planning & Program Manager

8/20/14**C. Recommendation for
Scope, Design &
Nonstandard Feature
Approval:**

Procedurally, this project was progressed using the NYSDOT Locally Administered Federal Aid Procedures Manual. All requirements requisite to these actions and approvals have been met, the required independent quality control reviews separate from the functional group reviews have been accomplished, and the work is consistent with established standards, policies, regulations and procedures, except as otherwise noted and explained.


Michael T. Croce, P.E.

Project Manager, Bergmann Associates

8/19/14**D. Public Hearing
Certification (23 USC
128):**

A public hearing was not required during preliminary design. A public meeting was conducted.

**Nonstandard Feature
Approval:**

The nonstandard features have been adequately justified and it is not prudent to eliminate them as part of this project.

**Scoping & Design
Approval:**

The required environmental determinations have been made and the preferred alternative for this project is ready for final design.


Jeron Rogers, P.E.

Manager of Special Projects

City of Rochester Department of Environmental Services

8-17-14

LIST OF PREPARERS

Group Director Responsible for Production of the Design Approval Document:

Michael T. Croce, P.E., Project Manager, Bergmann Associates

Description of Work Performed: Directed the preparation of the Design Approval Document in accordance with established standards, policies, regulations and procedures, except as otherwise explained in this document.



Note: It is a violation of law for any person, unless they are acting under the direction of a licensed professional engineer, architect, landscape architect, or land surveyor, to alter an item in any way. If an item bearing the stamp of a licensed professional is altered, the altering engineer, architect, landscape architect, or land surveyor shall stamp the document and include the notation "altered by" followed by their signature, the date of such alteration, and a specific description of the alteration.

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B.	Environmental Information
C.	Traffic Information
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G.	Public Involvement Plan and Meeting Summaries
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CHAPTER 1 - EXECUTIVE SUMMARY

This report identifies the purpose and need for a project at the intersection of Dewey Avenue and Driving Park Avenue along with its objectives and how they would be addressed. It also provides an assessment of the social, economic and environmental impacts of the proposed action. The proposed project is located in the City of Rochester, Monroe County, New York. The Project Identification Number (PIN) is 4755.55. This is a locally administered Federal Aid project.

1.1. Introduction

This report was prepared in accordance with the New York State Department of Transportation (NYSDOT) Procedures for Locally Administered Federal Aid Projects Manual, NYSDOT Project Development Manual, 17 NYCRR (New York Codes, Rules and Regulations) Part 15, and 23 CFR (Code of Federal Regulations) 771.

1.2. Purpose and Need

1.2.1. Where is the Project Located?

A project location map and project area map are included in Appendix A. The following is a project location summary.

- (1) Route names : Dewey Avenue and Driving Park Avenue
- (2) Municipality : City of Rochester
- (3) County : Monroe
- (4) Length : 0.24 mi (1,260 feet)
- (5) Limits : 300 feet south of subject intersection on Dewey Avenue, 350 feet north of subject intersection on Dewey Avenue (Selye Terrace intersection), from Finch Street to Straub Street along Driving Park Avenue

1.2.2. Why is the Project Needed?

Dewey Avenue and Driving Park Avenue currently meet at an offset intersection resulting in the need for two sets of traffic signals to control movements through the area. The northbound and southbound approaches are offset by approximately 180 feet, which complicates mobility through the area. The offset configuration results in congestion, delays and accidents creating difficult travel conditions for all modes of transportation including vehicle, pedestrian, bicycle, and mass transit users.

1.2.3. What are the Objectives/Purposes of the Project?

The purpose of this project is eliminate the existing offset intersection of Dewey Avenue and Driving Park Avenue.

The objectives of the project are as follows:

- (1) Address geometric deficiencies at the offset intersection to improve traffic flow, reduce vehicular congestion and improve highway safety.
- (2) Improve multimodal accommodations for pedestrians, bicyclists and transit users.
- (3) Improve the visual quality of the built environment and adjoining streetscape.

- (4) Enhance the stature of this intersection as a neighborhood node for commercial and recreational activities.

The project constraints include:

- (1) Design approval must be obtained before September 30, 2014 in order to obligate funding available for property acquisition.

1.3. What Alternative(s) Are Being Considered?

Alternative 1: No Action/Maintenance

Alternative 2: Dewey Avenue Realignment, North and South Approach

Alternative 3: Modern Roundabout

Alternative 4: Dewey Avenue Realignment, North Approach

Alternative 1: No Action/Maintenance

This alternative would retain the current Dewey Avenue / Driving Park Avenue intersection. No activities other than routine maintenance would be carried out. This alternative would not improve mobility, aesthetics or neighborhood viability. The null is retained only as a baseline for comparison to the feasible alternative and will not be discarded until a final decision is made regarding the selection of a build alternative.

Alternatives 2 and 3

These alternatives were considered but eliminated from further study because they would significantly impact surrounding residential and commercial properties. Several of these properties are eligible to be place on the historic registry. Refer to Section 3.1 for a discussion of these alternatives.

Alternative 4: Dewey Avenue Re-alignment, North Approach

This alternative would consolidate the offset intersection. The northern approach would be shifted west along Driving Park Avenue to align with the southbound Dewey Avenue approach. Each leg of the intersection would have a left turn lane and one through lane in each direction. There would also be a single lane turning roadway to connect Driving Park Avenue westbound with Dewey Avenue northbound. The new intersection would simplify navigation along Dewey Avenue and eliminate one of two signals.

Overall mobility for all users of the intersection would be enhanced. The southbound bicycle lane would extend along Dewey Avenue through the intersection. Northbound bicycle travel on Dewey Avenue would be facilitated by both a bicycle lane and shared lane markings. Shared lane markings would also be added eastbound and westbound along Driving Park Avenue extending existing markings through the project limits. Pedestrian accommodations and safety would be improved by eliminating one traffic signal and consolidating road crossings to a single location. Pedestrian crossings would be enhanced with high visibility markings or colored, textured crosswalks. Transit mobility would improve through the intersection given an anticipated reduction in vehicle hours of delay. All sidewalks within project limits would be replaced. The area vacated by shifting Dewey Avenue west would provide an opportunity to develop a pocket park. Neighborhood aesthetics would be enhanced with streetscape and landscape features.

For a more in-depth discussion of the design criteria and nonstandard features, see Section 3.2.3.

1.4 How will the Alternative(s) Affect the Environment?

Exhibit 1.4. - 1 Environmental Summary			
NEPA Classification	Class II, D-List	BY	Federal Highway Administration (FHWA)
SEQR Type:	Unlisted	BY	City of Rochester

NEPA: National Environmental Policy Act

SEQR: State Environmental Quality Review

Exhibit 1.4. - 2 Comparison of Alternatives		
Category	Alternatives	
	Alternative 1: Null	Alternative 4: Dewey Avenue Realignment, North Approach
Wetland impacts	None	None
100 year floodplain impact	None	None
Archeological Sites Impacted	None	None
Section 106/Section 4(f) Impacts	None	None
Impact to Trees > 3" dbh	None	22 Trees
Property Impacts	None	(1) Business Relocation (2) Partial Permanent Easements (7) Strip Permanent Easements (12±) Temporary Easements
Visual Impacts	None	Change in roadway alignment and relationship to adjacent buildings
Noise Impacts	None	14 Residences
Safety Impacts	None	Enhanced for all modes; Anticipated reduction in sideswipe accidents
Intersection Control	2 Signalized Intersections	1 Signalized Intersection
Intersection Capacity	No Change	Improvement with reduction in overall vehicle delay
Pavement Condition	Continued Deterioration	20 Year Surface Life 50 Year Service Life
Pedestrian Accommodations	Non ADAAG ¹ Compliant	ADAAG ¹ Compliant
Drainage	No Change	Enhanced Drainage, Bicycle Friendly Grates
Traffic Control Devices	No Change	MUTCD Compliant
Construction Cost	None	\$3,788,640

Notes: 1. ADAAG – Americans with Disabilities Act Accessibility Guidelines

There are no mitigation measures required or proposed for this project.

Anticipated Permits/Certifications/Coordination:

Permits

- City of Rochester Demolition Permit
- Monroe County Department of Health Permit (Potential)

Coordination

- Coordination with Federal Highway Administration (via NYSDOT)
- Coordination with the US Fish and Wildlife Service (via NYSDOT)
- Coordination with Monroe County Department of Transportation

Certifications

- NYS Department of Labor: Asbestos Variances

1.5. What Are The Costs & Schedules?

Design Approval must be obtained before September 30, 2014 to secure right-of-way (ROW) funding. Detailed design would commence after design approval is issued. The construction stage is not currently funded, therefore that phase of the project is not scheduled. The City of Rochester has committed to securing construction funding for this project and set a goal to start work within the next 2 years.

Exhibit 1.5 - 1 Project Schedule	
Activity	Date Occurred/Tentative
Scope Approval	March 2014
Design Approval	September 2014 (latest)
ROW Acquisition	Starts Fall 2014 (earliest)
Construction Start	Spring 2016 (earliest) - pending receipt of construction funding
Construction Complete	Approximately 1 ½ construction seasons from start.

Exhibit 1.5 - 2 Comparison of Alternatives Project Costs (2014 Dollars)		
Activities	Null Costs	Alternate 4 Costs
Roadway Reconstruction ¹	0	\$1,573,840
Subtotal 1	0	\$1,573,840
Incidentals ² (10%)	0	\$157,384
Subtotal 2	0	\$1,731,224
Contingency ³ (15%)	0	\$259,684
Subtotal 3	0	\$1,990,908
Field Change Payment (0%) ⁴	0	0
Subtotal 4	0	\$1,990,908
Mobilization (4%)	0	\$79,636
Subtotal 5	0	\$2,070,544
Expected Award Amount – Inflated ⁵ @ 3%/yr to midpoint of construction (2016 dollars)	0	\$2,196,640
Anticipated Construction Funding ⁶	0	\$1,905,000
Reimbursable Utility Costs ⁷	0	0
ROW Costs ⁸	0	\$1,217,000
Construction Inspection and Support ⁹	0	\$375,000
Total Project Costs	0	\$3,788,640

Notes:

1. Includes demolition of existing Family Dollar building and site. Does not include asbestos and hazardous waste / contaminated material remediation.
2. The potential cost increase due to unknown or un-tabulated items. Includes survey and work zone traffic control.
3. NYSDOT recommends a standard contingency of 15% at Design Approval stage.
4. Field Change Payment would be 5% per HDM Chapter 21 Section 21.4.3.3. However, this cost is included in the contingency.
5. An escalation rate of 3% has been included to account for potential future increases in labor, material, equipment, and other costs. Actual escalation will be dependent on year of construction start.
6. Anticipated construction budget in the NYSDOT STIP for Region 4. Additional construction funding will be required.
7. Reimbursable utility costs not anticipated for this project.
8. ROW incidentals and acquisition to be paid for with Highway Safety Improvement Program and Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds. Cost is from Genesee Transportation Council (GTC) Transportation Improvement Program. Actual costs are pending appraisals and negotiations.
9. Anticipated construction inspection and support budget given in the STIP is \$222,000. Estimated cost shown in table. Actual cost to be negotiated during scoping for construction phase services agreement.

At this stage of project development, the Engineer's Opinion of Probable Construction Cost is approximately \$291,640 in excess of the estimated construction funding shown in the NYSDOT STIP for Region 4. Refinement of the project construction cost would continue as design progresses. If there is a significant delay in obtaining and utilizing construction funding, the estimate should be reviewed for the effects of escalation in advance.

1.6. Which Alternative is Preferred?

The alternative that best meets the project objectives is Alternative 4: Dewey Avenue Realignment, North Approach. See Section 3.2.2 for a discussion of this alternative. The decision to enter final design would not be made until after the environmental determination is finalized and a thorough evaluation of public and agency comments on the draft design approval document has been completed.

1.7. What are the Opportunities for Public Involvement?

Public involvement began when the Dewey Avenue / Maplewood Neighborhood Steering Committee, in conjunction with Rochester Regional Community Design Center, held a Vision Plan Development and Charrette event in 2005. From 2005 through 2008, the committee met to develop guidance for the planning and execution of improvements on Dewey Avenue from Lexington Avenue to West Ridge Road.

Preliminary design began in March 2014. Public and private utility coordination also began at that time and will continue throughout design. Coordination with the City of Rochester, New York State Department of Transportation (NYSDOT), Monroe County Department of Transportation (MCDOT), Federal Highway Administration (FHWA), and other agencies is also ongoing.

The concept plan developed as a result of the charrette process served as the starting point for this project. Additional public meetings refined the concept. Several neighborhood and public meetings were held to gather input and comments on the proposed design. Targeted outreach to adjacent businesses, residents and property owners also took place. Refer to Appendix G for a copy of the Public Involvement (PI) Plan and summaries of the public meetings. See Exhibit 1.7 for a schedule of Public Involvement Plan and milestone dates.

Two (2) public meetings were held in May and June 2014. Project representatives specifically reached out to local business owners, affected property owners, and adjacent neighborhood groups. The public meetings consisted of a formal presentation followed by a comment period to obtain additional input. The public comment period, during which individuals could provide written comments to the City of Rochester, ended on June 30, 2014. Only one written comment was received and it was focused on detailed design elements of the project. Written comments, public meeting content, and meeting minutes, including a summary of verbal comments received at the public meetings, are included in Appendix G.

Exhibit 1.7 Public Involvement Plan Schedule of Milestone Dates	
Activity	Date Occurred/Tentative
Neighborhood Steering Committee	2005 through 2008
Focus Investment Strategies Group Meeting	3/19/14
Local Stakeholder Meeting	4/10/14
Meeting with Maplewood Neighborhood Association Infrastructure Committee	4/24/14
Utility and Agency Coordination Meeting	4/28/14
Public Outreach to Business Owners	5/7/14
Public Meeting with Maplewood Neighborhood Association	5/19/14
Public Meeting with Edgerton Neighborhood Association	6/23/14

To offer comments directly, you may contact.

Jeron Rogers, P.E.
Manager of Special Projects
City of Rochester
Department of Environmental Services
30 Church Street
Rochester, NY 14604

Please include the six digit Project Identification Number (PIN) 4755.55

Questions or comments

email: Rogersj@CityofRochester.Gov
Telephone: (585) 428-7415

The deadline for submitting comments on this report circulation was June 30, 2014.

The remainder of this report is a detailed technical evaluation of the existing conditions, the proposed alternatives, the impacts of the alternatives, copies of technical reports and plans and other supporting information.

CHAPTER 2 - PROJECT CONTEXT: HISTORY, TRANSPORTATION PLANS, CONDITIONS AND NEEDS

This chapter addresses the history and existing context of the project site, including the existing conditions, deficiencies, and needs at the intersection of Dewey Avenue and Driving Park Avenue.

2.1. Project History

Community leaders have discussed removing the offset intersection of Dewey Avenue and Driving Park Avenue since the 1920's. To date, no reconstruction or straightening of the intersection has occurred. Lanes were added to the roadways and traffic signals upgraded over the years in an attempt facilitate traffic flow through the area. Unfortunately, the economic health of the neighborhood has suffered since the 1960's as its commercial establishments have competed against suburban expansion and fading interest in urban neighborhoods. The Dewey Avenue and Driving Park Avenue intersection has been plagued by empty store fronts, a lack of inviting green space, and an inability to attract new business to the area.

A new process for visioning improvements for the Dewey Avenue/Maplewood Neighborhood corridor began in 2005. Stakeholder groups working with the Rochester Region Community Design Center (RRCDC) began meeting in the spring of 2006. A design charrette took place in November of that year. The group attending the charrette developed guiding principles for the revitalization of the entire corridor and generated specific goals for focus areas including the Dewey Avenue and Driving Park Avenue intersection. The concept plan generated by the charrette was the basis for this project.

The City of Rochester sought and secured Congestion Mitigation and Air Quality Improvement Program (CMAQ) and Highway Safety Improvement Program (HSIP) funding in 2013. The project is on the Genesee Transportation Council (GTC) 2014-2017 Transportation Improvement Plan (TIP). Design Phase Authorization was issued in March 2014 and preliminary design activities began shortly after. At this time, construction funding has yet to be identified.

2.2. Transportation Plans and Land Use

2.2.1. Local Plans for the Project Area

2.2.1.1. Local Comprehensive Plans ("Master Plan") – The project limits fall within the center of the City of Rochester designated Dewey / Driving Park Focused Investment Strategy (FIS) area. The goal of the strategy is to markedly improve neighborhoods in the City within a three to five year timeframe by focusing federal Community Development Block Grant (CDBG) funding and leveraging other available resources.

The process by which a Focused Investment Strategy is implemented is guided by the following designations:

- FIS Area – areas eligible for FIS funds. FIS implementation in this area will include: developing programs to address a high proportion of the properties; working to identify opportunities for future funding; and addressing problem properties as they arise.
- High Priority Streets – specific streets within the FIS Area on which: every parcel will be addressed in the early years of FIS according to its needs; the streets will be viewed as priority for funding; and the streets will be a priority for public infrastructure upgrades and improvements.
- Impact Area – an area immediately adjacent to the FIS Area, within which data will be collected and monitored for benchmarking and future decision-making.

Each FIS area is assigned a team of stakeholders charged with the responsibility of identifying the area's immediate needs, conceptualizing its long-term development strategies, and planning for the allocation of FIS resources. Initial programs have been established to support the rehabilitation of owner occupied and investor-owned properties, to improve vacant lots, and to support small community-driven projects.

Additionally, the project falls within the Dewey-Driving Park Urban Renewal District. The goal of the district is to influence the area to redevelop, promote economic development, and spur beautification of the area in both the public and private realm.

2.2.1.2. Local Private Development Plans – The former Pho-Tec site, located east of Mount Read Boulevard and approximately 1.0 miles of the subject intersection, is currently under redevelopment by the City of Rochester. The City of Rochester purchased the abandoned property and completed building demolition and environmental remediation as part of its commitment to clean up blighted industrial properties and turn them into areas ready for redevelopment. The proposed redevelopment includes three buildings for general light industrial use. Traffic impact studies have been completed for the proposed uses, however, there is no timeline for building construction and occupancy.

There are no other proposed or approved developments within the project area that would impact vehicular, bicyclist, or pedestrian traffic at the subject intersection.

2.2.2. Transportation Corridor

2.2.2.1. Importance of the Project Route Segment – Dewey Avenue and Driving Park Avenue provide direct access to numerous commercial businesses, residential buildings, and single family homes. Dewey Avenue runs north-south, parallel to both Lake Avenue (to the east) and Mount Read Boulevard (NYS Route 940K, to the west) and serves as the main north-south route through this portion of the City of Rochester. It connects the edge of the central business district to the northwest quadrant of the City and provides the only full truck access route from Lyell Avenue to Ridge Road (NYS Route 104) on this side of the Genesee River.

Driving Park Avenue runs east-west, parallel to both Lexington Avenue (to the south) and Ridgeway Avenue (to the north). Just east of Lake Avenue, it provides the only connection across the Genesee River within 1.0 miles in each direction, connecting the northwest and northeast sides of the City of Rochester.

2.2.2.2. Alternate Routes – Lake Avenue (0.38 miles to the east) and Mount Read Boulevard (NYS Route 940K) (1.2 miles to the west) are potential alternative routes for Dewey Avenue. They can be accessed from numerous cross streets including Lexington Avenue, Lyell Avenue (NYS Route 31), and Ridgeway Avenue. Lexington Avenue (0.12 miles to the south) and Ridgeway Avenue (0.90 miles to the north) are potential alternative routes for Driving Park Avenue. However, Lexington Avenue does not provide a connection across the Genesee River as compared to Driving Park Avenue and Ridgeway Avenue via Ridge Road (NYS Route 104). None of these routes would provide direct alternative access to the properties and businesses adjacent to the project area.

2.2.2.3. Corridor Deficiencies and Needs - The offset tee intersections pose an obstacle to corridor travel and limit mobility through the area, especially during peak periods of traffic. The proximity of the signalized intersections and unassigned lanes require multiple lane changes to navigate the area. Pedestrian movement is complicated by direct conflicts with turning vehicles. Public transportation experiences delays due to the geometry of the offset signalized intersection and transit stops cannot be situated at ideal locations. The large volume vehicles completing right turns to continue north or south on Dewey Avenue complicates locating a transit stop on the near-side of the upstream intersection. As a result, stops are often located further away from the intersection and crosswalks than desired. The relatively high concentration of turning vehicles negotiating their way through the offset intersection also makes it difficult to place a continuous bicycle lane through the area.

2.2.2.4. Transportation Plans – This project is on the approved GTC TIP under PIN 4755.55. It is described as the realignment of the Dewey Avenue and Driving Park Avenue intersection in the City of Rochester. Congestion Mitigation and Air Quality Improvement Program (CMAQ) and Highway Safety Improvement Program (HSIP) funds have been programmed for design and property acquisition activities. The project area is identified as a Focused Investment Strategy (FIS) area for the City of Rochester to foster neighborhood revitalization. Funding for construction has yet to be identified. There are no plans to reconstruct or widen this highway segment within the next 20 years.

2.2.2.5. Abutting Highway Segments and Future Plans for Abutting Highway Segments - Abutting highway segments include the following City Streets: Archer Street, Finch Street, Broezel Street, Straub Street, Pierpont Street, and Selye Terrace. Broezel St, Straub St and Pierpont St are one-way streets approximately 18 feet to 24 feet wide with on street parking. Archer St, Finch St and Selye Terrace are two way streets approximately 24 feet to 26 feet wide with on street parking. Sidewalks are found on both sides of all adjacent streets. There are no plans to reconstruct or widen the adjoining segments within the next 20 years.

2.3. Transportation Conditions, Deficiencies and Engineering Considerations

2.3.1. Operations (Traffic and Safety) & Maintenance

2.3.1.1. Functional Classification and National Highway System (NHS) – Classification data for the roadways approaching the subject intersection are summarized in Exhibit 2.3.1.1.

Exhibit 2.3.1.1. Classification Data		
Street Name	Dewey Avenue	Driving Park Avenue
Functional Classification	Urban Minor Arterial	Urban Major Collector
National Highway System (NHS)	No	No
Designated Truck Access Route	Yes	No
Qualifying Highway	No	No
Within 1 Mile of a Qualifying Highway	No	No
Within the 16 foot vertical clearance network	No	No

2.3.1.2. Control of Access – In general, there is no control of access along Dewey Avenue, Driving Park Avenue, or the intersecting roadways throughout the project limits. Residential and commercial driveways connect directly to these roads throughout the project area. Driveways are generally in conformance with the written requirements specified in the NYSDOT Policy and Standards for the Design of Entrances to State Highways with the exception of the right-in / right-out of the Family Dollar parcel and as noted in Section 2.3.3.1.

2.3.1.3. Traffic Control Devices – Each part of the offset intersection has a semi-actuated, three-color traffic signal. There are pedestrian push buttons with hand/man indications at signalized crosswalk locations. The offset intersection has a single traffic signal controller located in the northwest corner of the east intersection. Operating with a single controller allows the signal phasing to limit queues on the short segment between the two intersections. The controller is coordinated with others along Dewey Avenue. Traffic signal heads facing the short segment of roadway between the two intersections are optically programmed, which limits the field of the view of the signal to the appropriate approach. The signal also includes an emergency preemption system covering all approaches.

There are two school flashing beacon assemblies within the project limits. They are located just east of Broezel Street for eastbound drivers and just west of Finch Street for westbound drivers. These assemblies warn drivers of midblock school pedestrian crossings located adjacent to the project limits.

Signs within the project limits are generally in fair to good condition based upon field inspection. The signs are generally compliant with the New York State Manual on Uniform Traffic Control Devices in effect at the time of installation. However, in some locations grouping, placement, and sheeting materials are no longer compliant with the National Manual on Uniform Traffic Control Devices, New York State Supplement, and applicable revisions (MUTCD). Sign post conditions are generally fair throughout the project limits. None of the existing turn lanes have overhead lane use signs.

The intersection of Selye Terrace with Dewey Avenue operates as a two-way stop. Stop signs are posted on the right side of each approach to Dewey Avenue. The entry into Broezeel Street is signed as one way.

Along Driving Park Avenue, pavement markings are in fair to good condition based on field inspection. Pavement markings along Dewey Avenue were replaced as part of a resurfacing operation in 2012 and are in good condition based on field inspection. Bicycle lanes were added to Dewey Avenue immediately north and south of the subject intersection at the same time. Throughout the project limits, a double yellow full barrier line separates two-way traffic. White lane and edge lines delineate the travel lanes, bicycle lanes, and shoulder/on-street parking lanes. Turn lanes are not marked with symbols or letters. Left turn lanes on Dewey Avenue into the Family Dollar parking lot and Selye Terrace are marked with arrows.

Stop bars exist on all signalized intersection approaches. Crosswalks are located on all signalized intersection approaches with the exception of the short roadway between the two offset intersections. Patterns vary between Type S and the Monroe County Continental Type. Marked crosswalks also exist at the unsignalized intersections of Broezeel Street at Driving Park Avenue and both sides of Selye Terrace at Dewey Avenue.

2.3.1.4. Intelligent Transportation Systems (ITS) – The Monroe County Department of Transportation (MCDOT) owns and operates a closed circuit television (CCTV) camera above the eastern intersection to observe traffic operations. This system, along with intersections' signal controller, is connected back to the Regional Transportation Operations Center (RTOC) via fiber optic cable for remote monitoring and adjustment of signal timings.

The City of Rochester Police Department also owns and operates a CCTV camera and other observation equipment in the northeast corner of the eastern intersection. These features are mounted to an existing light pole.

There are no other ITS systems in operation or planned for the project area.

2.3.1.5. Speeds and Delay – The City of Rochester speed limit of 30 miles per hour applies to all roadways within the project limits. Speed data was obtained from historical automated tube counter information for the intersection approaches. The raw data are available in Appendix C. The speed data are summarized in Exhibit 2.3.1.5.

Exhibit 2.3.1.5. Speed Data				
Street Name	Dewey Avenue		Driving Park Avenue	
Segment	South Leg	North Leg	West Leg	East Leg
Existing Speed Limit	30 mph			
85 th Percentile Speed	Not Available ¹	34 mph (2011)	37 mph (2008)	34 mph (2011)

Notes:

1. Historic Speed Data by automated tube count is not available from NYSDOT for this location.
2. Year of automated tube count is indicated in parentheses after the 85th percentile speed.

No significant delays were observed to adversely affect the daily traffic operations along Dewey Avenue or Driving Park Avenue. Some queuing and delays occur at the intersection during peak periods of operation. Refer to Section 2.3.1.7 for more information.

2.3.1.6. Traffic Volumes -

2.3.1.6. (1) Existing Traffic Volumes – Manual intersection turning movement counts were completed at the intersections of Dewey Avenue and Driving Park Avenue west, Dewey Avenue and Driving Park Avenue east, Dewey Avenue and Selye Terrace, and Driving Park Avenue and Broezel Street. The traffic counts were collected on Wednesday, March 26, 2014 from 7:00 AM to 9:00 AM and 3:30 PM to 6:00 PM. The weekday peak hours of operations occurred from 7:15 AM to 8:15 AM and 4:45 PM to 5:45 PM for the AM and PM peak hours of operation, respectively. Detailed count data are contained in Appendix C along with peak hour turning movement diagrams labeled as Exhibit 2.3.1.6. (1) – 1.

Average daily traffic (ADT) volumes were then derived from the higher peak hour (PM peak hour). K factors were obtained from historic automated tube counter information. The existing ADT volumes are presented in Exhibit 2.3.1.6. (1) – 2.

Additional peak hour traffic information is summarized in Exhibit 2.3.1.6. (1) – 3. Traffic composition varies throughout the day. Heavy vehicles (buses and trucks) were counted separately. Heavy school bus volumes were observed during the peak hours of operation. Additionally, RGRTA operates two (2) high volume bus routes through the project area which add to the bus volumes through the intersection. Approximately five out of every six heavy vehicles is a bus during the peak hours of operation. Truck traffic was observed as limited through the project area, mainly consisting of local deliveries to the surrounding industrial and commercial land uses.

Pedestrian traffic volumes (crossings) were also collected. Pedestrian crossing activity during the peak vehicular hours varied but averaged about 1 person every 4 minutes at each crosswalk. Additional pedestrian volumes were obtained from Rochester Walks. During several counts completed in 2013, approximately 500 pedestrians per day walked along the west side of Dewey Avenue, north of Driving Park Avenue. Refer to Section 2.3.2.1 for additional information.

Field observations show approximately 85% of the traffic turning right off Dewey Avenue (northbound or southbound) subsequently turns left to stay on Dewey Avenue.

Exhibit 2.3.1.6. (1) - 2 Existing and Future Traffic Volumes								
Street Name	Dewey Avenue (North)		Dewey Avenue (South)		Driving Park Avenue (West)		Driving Park Avenue (East)	
Year	ADT	DHV	ADT	DHV	ADT	DHV	ADT	DHV
Existing (2014)	10,810	1,081	9,700	776	5,610	561	8,380	712
ETC (2018)	11,250	1,125	10,090	807	5,840	584	8,720	741
ETC+20 (2038)	13,730	1,373	12,310	985	7,130	713	10,640	904

Note: ETC = Estimated Time of Completion
DHV = Design Hour Volume

Exhibit 2.3.1.6. (1) - 3 Traffic Composition Data				
Street Name	Dewey Avenue (North)	Dewey Avenue (South)	Driving Park Avenue (West)	Driving Park Avenue (East)
Directional Distribution	AM: 35% / 65% (NB / SB) PM: 55% / 45% (NB / SB)	AM: 40% / 60% (NB / SB) PM: 58% / 42% (NB / SB)	AM: 54% / 46% (EB / WB) PM: 45% / 55% (EB / WB)	AM: 57% / 43% (EB / WB) PM: 42% / 58% (EB / WB)
Peak Hour Factor	0.83 AM, 0.94 PM (Averaged across the offset signalized intersection)			
% Peak Hour Heavy Vehicles	6% AM / PM (Averaged across the offset signalized intersection)			

2.3.1.6. (2) Future No-Build Design Year Traffic Volume Forecasts – The Estimated Time of Completion (ETC) is 2018. A design year of 2038 (ETC+20) was selected per Appendix 5 of the NYSDOT Project Development Manual (PDM). Traffic volume projections were completed for ETC (2018) and the design year ETC+20 (2038). ETC+30 year projections were not completed as the project is not near a bridge or large culvert.

An average annual growth rate of 1.0% was used as recommended by the MCDOT. This growth factor (annually compounded) was used to forecast turning movement and ADT volumes for the years 2018 and 2038. Additionally, the Pho-Tec development, on Driving Park Avenue adjacent to Mount Read Boulevard (approximately one mile west of the project area), is projected to increase volumes along Driving Park Avenue. This development is a City of Rochester decontamination and site redevelopment project in order to spur reuse and growth. Volumes from this development, with an anticipated ETC of 2016, were distributed through the project area prior to forecasting the 2038 volumes.

Forecasted ADT volumes for the years of 2018 and 2038 appear in Exhibit 2.3.1.6. (1) – 2. Peak hour turning movement diagrams for 2018 and 2038 are provided in Appendix C, Exhibit 2.3.1.6. (2) – 1.

2.3.1.7. Level of Service and Mobility - Level of Service (LOS) is a qualitative measure describing motorist satisfaction with various factors influencing traffic congestion including travel time, speed maneuverability, and delay on an average day during the design year. The methodology for performing capacity analyses and determining level of service is documented in the Highway Capacity Manual (HCM) (Transportation Research Board, Washington D.C., 2010). LOS ranges from A to F. LOS A describes conditions with free-flow operations at desirable travel speeds and little or no delay. LOS F denotes highly congested conditions with significant congestion and substantial delays.

LOS for signalized and unsignalized intersections is determined from the average seconds of delay per vehicle (sec/veh). Signalized intersection analyses yield LOS for groups of lanes (those lanes shared by similar movements) on each approach and the intersection as a whole. Unsignalized intersection analyses result in LOS values for critical movements only. Critical movements are those that must yield or stop and give the right-of-way to other approaching vehicles. LOS D or better on each lane group is generally considered acceptable during peak commuter periods in urban areas such as the City of Rochester. Further information on LOS for both signalized and unsignalized intersections is below in Exhibit 2.3.1.7. – 1.

Exhibit 2.3.1.7. - 1 LOS Criteria			
Unsignalized Intersection LOS		Signalized Intersection LOS	
LOS	Average Control Delay (s/veh)	LOS	Average Control Delay (s/veh)
A	≤ 10	A	≤ 10
B	> 10 - 15	B	> 10 - 20
C	> 15 - 25	C	> 20 - 35
D	> 25 - 35	D	> 35 - 55
E	> 35 - 50	E	> 55 - 80
F	> 50	F	> 80

To properly assess existing and future no-build operations at the subject intersections, it was necessary to analyze the interaction of closely spaced signals and varied traffic control elements. Synchro, Version 8.0 (by Trafficware) was chosen to accomplish that task. Synchro implements the methods of the HCM for signalized and unsignalized intersections. The intersections under review are the intersections of Dewey Avenue and Driving Park Avenue west, and Dewey Avenue and Driving Park Avenue east / Broezel Street. Broezel Street was added to the Dewey Avenue east intersection because field observations suggest it operates as part of the eastern signalized intersection during the peak periods. Existing timings and phasing for the intersections were obtained from the MCDOT. All existing signal timings and offsets were retained for the future no-build conditions. All Synchro output reports are contained within Appendix C.

Although each of the intersection approaches are two-lane, none are marked for a specific lane use or movement. Field observations were made to ascertain how the marked travel lanes are used during the peak hours of operation. This was then used in the Synchro modeling. The two lane approaches in the short leg between the two intersections are not marked, allowing moving vehicles to bypass stopped ones and providing room for large trucks and buses to complete turning movements. However, these unmarked multi-lane approaches can confuse the unfamiliar driver and detract from overall safety. Refer to Section 2.3.1.8. for more information.

2.3.1.7. (1) Existing level of service and capacity analysis – The results of the level of service analysis for existing conditions (2014) during the AM and PM peak hours are summarized in Exhibit 2.3.1.7. – 2.

Overall, the two signalized intersections operate at LOS B during both peak hours. Only one movement during each peak hour experiences LOS D or worse conditions. The southbound left-through movement at the eastern intersection experiences LOS D, with approximately 49 seconds of delay per vehicle, in both the AM and PM peak hours.

On-street parking along the south side of Driving Park Avenue, in front of the commercial store fronts, often blocks an eastbound through travel lane during the day. Although this location is posted for “no standing” from 7:00 to 9:00 AM and 4:00 to 6:00 PM daily, vehicles often park there illegally. Field and ITS camera observations indicate that vehicles park there about 20% of the restricted time periods. As shown in Exhibit 2.3.1.7. – 2, this blocking results in an increase of approximately 2 seconds of delay per vehicle on average. During the AM peak hour, the overall intersection LOS of the eastern intersection degrades to LOS C.

2.3.1.7. (2) Future no-build design year level of service – Level of service analyses were also completed for future no-build conditions, at 2018 (ETC) and 2038 (ETC+20). An exhibit summarizing the AM and PM peak hour level of service and capacity analyses for the no-build conditions is provided in Exhibit 2.3.1.7. - 2.

In general, projected operations at the signalized intersections in 2018 (ETC) reflect slight increases in delay in line with minor increases in traffic growth. The intersections would continue to operate at LOS B overall during both peak hours with one exception. During the AM peak hour, the eastern intersection

would operate at LOS C overall. Similar to existing conditions, the southbound left-through movement at the eastern intersection would experience LOS D conditions during both peak hours. No additional movements would experience LOS D or worse conditions in 2018. Eastbound blocking conditions would result in the eastern intersection operating at LOS C during the PM peak hour.

By 2038 (ETC+20), the projected operations of the signalized intersections reflect further increases in delay and queuing as compared to 2018. The western intersection would continue to operate at LOS B overall during both peak hours with the eastern intersection operating at LOS C overall, also during both peak hours. Several movements would experience additional vehicle delay by 2038. The southbound left-through movement at the eastern intersection would experience LOS E and LOS D conditions during the AM and PM peak hours respectively. Additionally, the westbound left/through movement at the eastern intersection would experience LOS D operations during both peak hours. During the PM peak hour, the eastbound through movement at the western intersection operates at LOS D.

When an eastbound through lane is blocked by on-street parking, intersection operations are significantly impacted in 2038. The eastbound left-through-right movement at the eastern intersection is expected to operate at LOS D and F during the AM and PM peak hours respectively. This is in contrast to LOS B / C conditions with two travel lanes on this approach. Additionally, the eastern and western intersections would change to LOS D and C overall, respectively, during the PM peak hour. During the PM peak hour, the eastbound through lane at the western intersection would also drop to LOS E. This would be due to the limited capacity and increased queuing of the subsequent eastbound left-through-right lane at the eastern intersection.

Exhibit 2.3.1.7. - 2
Existing / No-Build Intersection Level of Service Summary

AM Peak Hour
7:15 AM to 8:15 AM

Intersection	Approach	Movement	2014 Existing		2014 Existing - EB Blocked Lane		2018 No-Build		2018 No-Build - EB Blocked Lane		2038 No-Build		2038 No-Build - EB Blocked Lane	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Dewey Avenue and Driving Park Avenue (WEST)	Eastbound	Thru	26.4	C	26.4	C	27.0	C	27.0	C	28.8	C	29.3	C
		Right	6.7	A	6.7	A	6.5	A	6.5	A	8.2	A	8.2	A
		Approach	20.2	C	20.2	C	20.9	C	20.9	C	22.6	C	23.0	C
	Westbound	Left	15.3	B	15.2	B	15.0	B	14.9	B	19.4	B	19.3	B
		Thru	8.7	A	8.7	A	8.3	A	8.3	A	8.4	A	8.4	A
		Approach	12.7	B	12.7	B	11.9	B	11.8	B	14.3	B	14.3	B
	Northbound	Left	17.6	B	17.6	B	18.0	B	18.0	B	20.5	C	20.5	C
		Right	8.8	A	9.0	A	8.9	A	9.3	A	9.8	A	11.4	B
		Approach	9.5	A	9.7	A	9.7	A	10.0	B	10.7	B	10.5	B
	Overall		13.8	B	13.8	B	13.6	B	13.6	B	15.5	B	15.7	B
Dewey Avenue and Driving Park Avenue / Broezel Street (EAST)	Eastbound	Left	8.7	A			9.9	A			17.3	B		
		Left/Thru/Right			11.5	B			16.7	B			41.1	D
		Thru/Right	7.5	A			7.6	A			8.4	A		
	Westbound	Approach	8.2	A	11.5	B	9.0	A	16.7	B	13.6	B	41.1	D
		Left/Thru	27.6	C	27.9	C	31.1	C	31.6	C	36.0	D	37.5	D
		Right	4.9	A	4.9	A	5.4	A	5.4	A	7.4	A	7.4	A
	Southbound	Approach	21.3	C	21.5	C	25.3	C	25.7	C	29.5	C	30.7	C
		Left/Thru	49.9	D	49.9	D	50.4	D	50.4	D	55.0	E	55.0	E
		Right	10.0	B	10.0	B	10.2	B	10.2	A	11.5	B	11.5	B
	Overall		27.4	C	27.4	C	27.8	C	27.8	C	30.6	C	30.6	C
		19.8	B	20.9	C	21.2	C	23.8	C	24.9	C	34.0	C	

PM Peak Hour
4:45 PM to 5:45 PM

Intersection	Approach	Movement	2014 Existing		2014 Existing - EB Blocked Lane		2018 No-Build		2018 No-Build - EB Blocked Lane		2038 No-Build		2038 No-Build - EB Blocked Lane	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Dewey Avenue and Driving Park Avenue (WEST)	Eastbound	Thru	29.9	C	29.9	C	32.2	C	32.7	C	35.3	D	55.4	E
		Right	8.9	A	8.9	A	11.9	B	11.9	B	13.7	B	13.7	B
		Approach	25.6	C	25.6	C	28.6	C	29.1	C	31.5	C	48.1	D
	Westbound	Left	9.7	A	9.5	A	11.2	B	11.0	B	13.7	B	13.5	B
		Thru	6.5	A	6.5	A	6.3	A	6.3	A	5.7	A	5.8	A
		Approach	8.1	A	8.1	A	8.8	A	8.7	A	9.8	A	9.7	A
	Northbound	Left	25.0	C	25.0	C	25.9	C	25.9	C	29.9	C	29.9	C
		Right	12.1	B	12.5	B	12.5	B	13.3	B	23.1	C	14.1	B
		Approach	13.5	B	13.9	B	14.0	B	14.7	B	23.8	C	15.9	B
	Overall		13.6	B	13.7	B	15.1	B	15.4	B	19.6	B	20.6	C
Dewey Avenue and Driving Park Avenue / Broezel Street (EAST)	Eastbound	Left	9.4	A			11.0	B			23.2	C		
		Left/Thru/Right			14.7	B			21.4	C			84.6	F
		Thru/Right	5.7	A			5.8	A			6.5	A		
	Westbound	Approach	8.2	A	14.7	B	9.1	A	21.4	C	17.0	B	84.6	F
		Left/Thru	32.5	C	33.5	C	33.8	C	35.1	D	38.5	D	41.3	D
		Right	9.0	A	9.0	A	9.6	A	9.6	A	13.3	B	13.3	B
	Southbound	Approach	23.0	C	23.6	C	24.2	C	25.0	C	28.6	C	30.2	C
		Left/Thru	49.0	D	49.0	D	48.8	D	48.8	D	49.3	D	49.3	D
		Right	10.2	B	10.2	B	10.4	B	10.4	B	11.6	B	11.6	B
	Overall		22.7	C	22.7	C	22.7	C	22.7	C	23.7	C	23.7	C
		16.9	B	19.7	B	17.4	B	22.8	C	22.2	C	51.1	D	

2.3.1.8. Safety Considerations, Accident History and Analysis – An accident analysis was performed in accordance with the NYSDOT Highway Design Manual Chapter 5, Section 5.3. New York State Department of Motor Vehicles (NYSDMV) Police Accident Reports (MV104-A forms) were obtained from the New York State Department of Transportation covering a three-year period from March 1, 2010 to February 28, 2013. The accident study covered the area within and adjacent to the project limits including 900 feet along Driving Park Avenue (from Finch St to Straub St), 250 feet along Dewey Avenue south of Driving Park Avenue, and 350 feet north along Dewey Avenue north of Driving Park Avenue. There are no High Accident Locations (HALs), Highway Safety Investigations (HSIs), Priority Investigation Locations (PILs), Safety Deficient Locations (SDLs), or Priority Investigation Intersections (PIIs) within the study area as these designations are defined by the NYSDOT for State Highways.

Accidents are categorized in the following groups: fatal, injury, property damage only (PDO) or non-reportable (NR). An accident is considered non-reportable if there is no personal injury and either:

- a) No motorists report was filed,
- b) No dollar value of vehicular damage was entered into the report, or
- c) The amount of vehicular damage did not exceed \$1,000.

A total of 65 accidents were documented within the project limits during the 3-year study period. Of the 65, there were 18 (28%) injury, 21 (32%) PDO, and 26 (40%) NR accidents. No fatalities were reported. A table summarizing the 65 intersection and midblock accidents is included in Appendix C. A collision diagram is also included in Appendix C.

Of the 65 total accidents, there were five (5) pedestrian accidents within the study area. Three of the accidents were at a crosswalk and 2 resulted from pedestrians crossing the road outside a crosswalk. All pedestrian accidents resulted in an injury. The three pedestrian accidents in the crosswalk all occurred in the east-west crossing of the southern Dewey Avenue approach.

Forty-three (43) of the 65 accidents occurred at an intersection or driveway within the study area. Driveway accidents were included in the intersection summary due to the proximity of the driveway to the intersection and the accident type being consistent in the project area. These accidents are summarized by location and dominant accident type in Exhibit 2.3.1.8-1.

Exhibit 2.3.1.8. - 1						
Intersection/Driveway Accident Summary by Location and Type						
Intersecting Street	Type					Total
	Rear End	Right Angle	Left Turn	Sideswipe/ Overtaking	other	
Dewey Avenue at Driving Park Avenue	7	3	3	3	4	20
Selye Terrace	3	6	0	0	0	9
Family Dollar Driveway	1	5	0	0	0	6
Price Rite Driveway	1	1	1	0	0	3
Finch Street	2	0	0	0	0	2
Broezel Street	0	1	0	1	0	2
Straub Street	1	0	0	0	0	1
Total	15	16	4	4	4	43

Reviewing the intersection accidents, rear end (35%) and right angle (37%) collisions account for a large majority (72%) of the accidents in the study area. These types of accidents are common at signalized intersections in urban environments. Many of the right angle accidents occurred at Selye Terrace and the Family Dollar driveway. A review the reports revealed a vehicle was often trying to cross through a lane of stopped traffic and was struck in the second lane. The sideswipe/overtaking accident pattern is atypical for a signalized intersection. These accidents occurred as drivers completed weave like maneuvers, navigating the offset intersection. On occasion, parked cars were struck between the offset intersections.

The most common causes cited by the accident reports were lack of driver attention, following too closely, and disregarding traffic control. Twelve (12) of the intersection accidents involved a personal injury. It was noted that many of the driveway and side street accidents occurred when a motorist tried pulling out of a driveway/intersection, crossed multiple lanes of stopped traffic, and collided with another vehicle.

The MCDOT and NYSDOT each maintain a database, countywide and statewide respectively, of average accident rates for different types of roadway segments and intersections. Accident rates for linear sections are expressed in terms of the number of accidents per million vehicle miles of travel (acc/mvm). Rates for intersections are expressed in terms of the number of accidents per million entering vehicles (acc/mev). Average accident rates for similar facilities countywide and statewide were compared to those calculated for locations throughout the project limits to assess the actual safety performance of the Dewey Avenue / Driving Park Avenue intersection versus reasonable expectation.

As shown in Exhibit 2.3.1.8.-2, the calculated accident rates for the Dewey Avenue and Driving Park Avenue intersection are higher than the countywide and statewide average rates for an intersection/driveway. As indicated above, the most common accident types are right angle and rear-end collisions, accounting for 31 of the 65 accidents. Reviewing the accident reports, these occur due to a lack of driver attention, following too closely, and a motorist attempting to maneuver through stopped traffic.

Exhibit 2.3.1.8. - 2 Accident Rate Summary				
Location Type	Number of Injury and PDO Accidents	Calculated Accident Rate	MCDOT Rate for Similar Facilities	NYSDOT Rate for Similar Facilities
Intersection/Driveway	43	2.72	0.61 ³	0.27
Non-Intersection	22	2.08	2.98	N/A
Non- Intersection and Driveways	31	2.93	2.98	N/A
Mainline and Junctions	65	6.15	N/A	2.48

Notes: 1. Segment accident rates are measured in accidents per million vehicle miles traveled (acc/MVM).
 2. Intersection accident rates measured in accidents per million entering vehicles (acc/MEV).
 3. MCDOT Intersection Average Accident Rates 2009-2011 (Urban Minor Arterial / Urban Collector – Signalized)

2.3.1.9. Existing Police, Fire Protection and Ambulance Access – The City of Rochester Fire Department uses the Dewey Avenue/Driving Park Avenue intersection to respond to local calls from one of three nearby stations; Dewey Avenue/Ridgeway Avenue, Mt Read Boulevard/Emerson Street, and 405 Lyell Avenue. The City of Rochester Police Department also uses the Dewey Avenue/Driving Park Avenue intersection to respond to local calls. Currently the City of Rochester contracts with Rural Metro Medical Services who utilizes the area when responding to local calls for emergency medical service.

2.3.1.10. Parking Regulations and Parking Related Conditions – There are five areas within the project limits with various parking restrictions as shown on the map found in Exhibit 2.3.1.10., Appendix A. There are three areas where parking is allowed on Driving Park Avenue and two areas along Dewey Avenue. A total of twenty-four legal parking spaces exist within the project limits.

Parking along the southern curb of Driving Park Avenue, in front of the business located within the offset intersection, is restricted during peak travel times. This parking zone was often observed being utilized during the restricted time, impacting travel through the offset intersection. See Section 2.3.1.7 for a discussion of on-street parking impacts on traffic operations.

2.3.1.11. Lighting – Street lighting within the project limits is owned and maintained by the City of Rochester. Lights consist of cobra head style high-pressure sodium luminaires attached to metal poles.

2.3.1.12. Ownership and Maintenance Jurisdiction – Dewey Avenue, Driving Park Avenue, and all intersecting streets within the project area are owned and maintained by City of Rochester under authority from Section 12 of New York State Highway Law. This includes all pavement, curb, street lighting, landscaping, highway appurtenances, and pavement striping. All roadways within the project limits are easement streets, indicating “ownership by use.” All drainage systems within the City of Rochester are owned and maintained by Monroe County Pure Waters under authority from Section 10, Subdivision 25 of the New York State Highway Law. All traffic signals and street signs within the City are owned and maintained by Monroe County Department of Transportation under authority from Section 12 of the New York State Highway Law. All snow removal operations are completed by the City of Rochester including clearing of sidewalks.

2.3.2. Multimodal

2.3.2.1. Pedestrians – Sidewalks exist on both sides of Dewey Avenue, Driving Park Avenue, and all side streets within the project limits. The sidewalk surfaces are concrete. Surface conditions vary from poor to good with occasional tripping hazards. Curb ramp conditions vary from poor to good. They are generally of a directional style. A limited number of ramps are of the diagonal style.

Crosswalks at signalized intersections are striped. Minor road crossings generally do not have striping. Striped crosswalks are in poor condition. No detectable warning surfaces are present at the ramps.

Rochester Walks is a City of Rochester initiative aimed at getting residents walking, moving, and becoming more physically active. Rochester Walks promotes walking, labeling safe and interesting walking routes, and establishing walking clubs. Rochester Walks has two established walking routes, a long walk (approximately one mile) and short walk (approximate one-half mile), both beginning at the northeast corner of the Dewey Avenue / Driving Park Avenue intersection. The walking route is designated by a variety of signs and markings on the sidewalks.

A Pedestrian Generator Checklist can be found in Appendix C.

2.3.2.2. Bicyclists – Bicyclists are accommodated within the existing street width. The Dewey Avenue and Driving Park Avenue intersection is a gap in the City's network of dedicated bicycle lanes. The northbound dedicated bicycle lane ends 115 feet south of Driving Park Avenue and starts again to the north of Driving Park Avenue. The southbound bicycle lane along Dewey Avenue ends before Selye Terrace. The southbound Dewey Avenue bicycle lane resumes just south of Driving Park Avenue.

Driving Park Avenue accommodates bicyclists, having shared lane markings on the pavement in both the eastbound and westbound directions to the east of the offset intersection. Heading west from the offset intersection along Driving Park, there are no bicycle facilities until west of Ramona Street.

2.3.2.3. Transit – The Rochester Genesee Regional Transportation Authority (RGRTA) provides and operates transit services through the project area and greater Monroe County.

RGRTA operates two bus routes through the Dewey Avenue / Driving Park Avenue intersection. Route 10/10X runs north-south along Dewey Avenue stopping within the project limits. Route 10/10x operates 7 days a week primarily between the hours of 6 AM and 12 AM. Route 16/16x operates east-west along Driving Park Avenue weekdays primarily between the hours of 6 AM and 7 PM.

RGRTA and private contractors provide bus services for City of Rochester and local private school students. Each school has multiple routes and students living near to project site may be transported through the area.

2.3.2.4. Airports, Railroad Stations, and Ports – There are no airports, railroad stations or port entrances within or in the vicinity of the project limits.

2.3.2.5. Access to Recreation Areas (Parks, Trails, Waterways, and State Lands) – There are no entrances to recreation areas within the project limits.

2.3.3. Infrastructure

2.3.3.1. Existing Highway Section – Existing features within the project area appear on the typical sections, plans, and profile sheets contained in Appendix A.

2.3.3.1. (1) Lane Width – The existing travel lane width within the project limits is variable. Travel lanes on Dewey Avenue northbound vary from 10 feet in areas adjacent to bicycle lanes and parking lanes to 14 feet in areas adjacent to the curb. Travel lanes on Dewey Avenue southbound vary from 10 feet in areas adjacent to bicycle lanes and parking lanes to 15 feet in areas adjacent to the curb.

Driving Park Avenue lane widths vary from 10 feet to 24 feet depending on proximity to curb, presence of turning lanes, and parking lanes.

2.3.3.1. (2) Shoulder – There are no shoulders within the project limits.

2.3.3.1. (3) Horizontal Alignment – There are no horizontal curves on Dewey Avenue or Driving Park Avenue. Dewey Avenue and Driving Park Avenue meet at approximately 90 degrees. The northbound and southbound Dewey Avenue approaches are separated by 180 feet.

2.3.3.1. (4) Vertical Alignment – The vertical profile of Dewey Avenue and Driving Park Avenue generally follow the rolling terrain within the project limits. All grades are less than 1.5%.

2.3.3.1. (5) Intersection Geometry – Both Dewey Avenue approaches to Driving Park consist of a left turn and right turn lane typical of a conventional “T” intersection. The Driving Park Avenue approaches to Dewey Avenue have two lanes eastbound and two lanes westbound. The lane configuration approaching the first Dewey Avenue “T” consists of a through lane and a through-right turn lane. As a driver progress towards the second Dewey Avenue “T” the lane configuration changes to a through-left lane and a through lane.

2.3.3.1. (6) Roadside Elements – The project area has roadside elements consistent with an urban environment including vertical face curb, traffic signs, traffic signal appurtenances, fire hydrants, street lighting, community garbage receptacles, and curb lawn areas with trees. In the northwest corner of Dewey Avenue and Driving Park Avenue there is a gas relief valve and a RGRTA bus shelter. Also on the northwest corner of Dewey Avenue and Driving Park Avenue is a community garden with a “Welcome to the Maplewood Neighborhood” sign and a commercial pylon sign.

2.3.3.1. (7) Driveways – There are numerous driveways within the project limits having a mix of commercial and residential uses. Driving Park Avenue has 10 residential and 6 commercial entrances. Dewey Avenue has 2 residential and 6 commercial entrances. Several of the commercial driveways, in particular the right-in and right-out from the Family Dollar Parcel, are located in close proximity to or directly in the intersection resulting in additional mobility and safety concerns. These driveways do not meet the spirit and intent of the NYSDOT Policy and Standards for the Design of Entrances to State Highways.

2.3.3.2. Geometric Design Elements Not Meeting Minimum Standards – Existing geometric elements were compared with the minimum standards used by the NYSDOT to make capital infrastructure improvements. The NYSDOT standards for 2R/3R projects are used in place of reconstruction standards as they help identify areas that may need improvement rather than merely identify elements that do not meet current standards. This review helps ensure that project objectives and feasible alternatives consider key deficiencies. The relationship of features not meeting standards are noted in Section 2.3.3.2. (1).

2.3.3.2. (1) Critical Design Elements – The following non-standard features were identified based on a design speed of 35 mph for the roadways' functional classes.

Dewey Avenue

Horizontal Clearance: Existing natural gas vent pipes associated with a regulator station are less than the required 1.5 feet away from the traveled way. Additionally, traffic signal poles are less than the required 3.0 feet away from the traveled way at the intersection.

Driving Park Avenue

Travel Lane Width: Existing travel lane width adjacent to the curb or parking lane is 11 feet in several locations. This lane is narrower than required for shared bicyclist accommodation. The minimum width of a wide curb lane specifically intended to accommodate bicycling is 12 feet.

Horizontal Clearance: Existing mature trees are less than the required 1.5 feet away from the traveled way. Additionally, traffic signal poles are less than the required 3.0 feet away from the traveled way at the intersection.

2.3.3.2. (2) Other Design Parameters – The following is a list of various other controlling design parameters that do not conform to normally accepted practice:

- Northbound bicycle lane ends abruptly into a travel lane, south of Driving Park Avenue.
- Poor ADA accessibility due to steep curb ramps and missing detectable warning fields.
- Existence of drainage grates unsuitable for bicycle travel.
- Unassigned lane uses between the two parts of the offset intersection require abrupt and frequent lane changes.

2.3.3.3. Pavement and Shoulder – A pavement evaluation was completed and will be used to prepare the proposed pavement section during final design. All pavement within the project area shows signs of moderate to heavy wear. There are indications of utility repair, areas of top course failure, and areas of general pavement failure as evident from the reflective cracking. Crack sealing and minor pavement rehabilitation has been performed in the project area. A Pavement Evaluation and Treatment Selection Report (PETSR) is included in Appendix D and includes more detail regarding the existing pavement.

2.3.3.4. Drainage Systems – Highway runoff is collected by a system of catch basins and a closed network of underground pipes. The overall network consists of a combined (storm and sanitary) system with each catch basin connected directly to the main trunk line down the center of the road. The existing combined sanitary-storm sewer is owned and maintained by Monroe County Pure Waters. Existing properties (i.e. sanitary systems, parking lots, etc.) also drain into the combined sewer system. There are either 12 inch, 18 inch, or 20 inch vitrified clay pipe (VCP) trunk lines down Driving Park Avenue and Dewey Avenue (north of Driving Park Avenue). These all drain to a 54 inch reinforced concrete pipe on Dewey Avenue, south of Driving Park Avenue. This system eventually drains into the Combined Sewer Overflow Abatement Program (CSOAP) tunnels, which is connected to the Frank E. VanLare wastewater treatment facility. Water is eventually treated before being released in Lake Ontario. The existing trunk lines under Dewey Avenue and Driving Park Avenue were televised by Monroe County Pure Waters for condition. Overall, the trunk lines are in good condition with one exception. The existing 20 inch VCP trunk line between the west and east intersections of Driving Park Avenue and Dewey Avenue is in poor condition and will be lined by Monroe County Pure Waters prior to construction. Therefore, no trunk lines within the project limits would require repair or replacement as part of this project.

Catch basin grates are of mixed types throughout the project limits. They are either older cast iron (parallel bar) type, bicycle friendly reticulate grates, or rectangle grates.

2.3.3.5. Geotechnical – There are no special geotechnical concerns with the soils or rock slopes within the project area. A geotechnical report is being prepared describing the existing soil conditions and will be added to Appendix E when available.

2.3.3.6. Structure – There are no bridges within the project limits.

2.3.3.7. Hydraulics of Bridges and Culverts – There are no bridges or culverts over waterways within the project limits.

2.3.3.8. Guide Railing, Median Barriers and Impact Attenuators – There are no guide rails, median barriers, or impact attenuators within the project limits.

2.3.3.9. Utilities – Utilities within the project limits include underground gas, water, combined sanitary-storm sewer, electric, fiber optic communication, fiber optic traffic signal interconnect, cable communication, and telephone. There are also overhead electric, telephone, cable, and fiber optic suspended from wooden utility poles, primarily located in the rear portion of adjacent private properties. Existing underground and overhead facilities are shown on the plans contained in Appendix A and are summarized in Exhibit 2.3.3.9. The existing combined sanitary-storm sewer is owned and maintained by Monroe County Pure Waters and is described in Section 2.3.3.4. Underground electric serving the existing street lighting is owned and maintained by the City of Rochester and is described in Section 2.3.1.11. Physical surface features such as manholes, valve boxes, and hydrants were field located. Record information provided by the utility owners was also plotted on the plans. Depths have not been field verified. In general, the age of the existing utility infrastructure varies.

RG&E Gas has plans to remove their existing regulating station in the northwest corner of the intersection of Driving Park Avenue and Dewey Avenue east. This work will occur after gas main improvements are completed along various side streets northwest of the project area. This work is expected to be complete by 2017.

Exhibit 2.3.3.9. Existing Utilities			
Owner	Type	Location & Side	Comment
Rochester Water Bureau	12 in PVC Water Main	Driving Park Avenue – West of Dewey Avenue West, Left	
	36 in Concrete Water Main	Driving Park Avenue – West of Dewey Avenue West, Right	
	20 in Water Main	Driving Park Avenue – East of Dewey Avenue West to Broezel Street, Right	
	6 in Water Main	Driving Park Avenue – East of Broezel Street, Right	
	16 in Water Main	Driving Park Avenue – East of Broezel Street, Right	
	20 in Water Main	Dewey Avenue – North of Driving Park Avenue, Right	
	24 in Water Main	Dewey Avenue – South of Driving Park Avenue, Left	
	8 in Water Main	Dewey Avenue – South of Driving Park Avenue, Right	
	6 in Water Main	Selye Terrace, Left	
	6 in Water Main	Broezel Street, Right	
Monroe County Department of Transportation	Underground Fiber Optic Cable	Dewey Avenue – South of Driving Park Avenue, Right	
	Underground Fiber Optic Cable	Dewey Avenue – North of Driving Park Avenue, Left	
	Underground Fiber Optic Cable	Driving Park Avenue – Between Dewey Avenue West and Dewey Avenue East, Right	In RG&E Electric Duct Bank
RG&E Gas	8 in Wrought Iron Gas Main	Driving Park Avenue, Left	
	8 in Wrought Iron Gas Main	Driving Park Avenue – East of Dewey Avenue West to Broezel Street, Left	
	8 in Wrought Iron Gas Main	Dewey Avenue – South of Driving Park Avenue, Left	
	4 in Wrought Iron Gas Main	Dewey Avenue – 190 feet South of Driving Park Avenue, Crossing / Right	
	(2) 8 in Wrought Iron Gas Main	Dewey Avenue – North of Driving Park Avenue for 120 feet, Left	
	12 in Wrought Iron Gas Main	Dewey Avenue – 120 feet North of Driving Park Avenue to North, Left	

Exhibit 2.3.3.9. Existing Utilities			
Owner	Type	Location & Side	Comment
	Gas Main Regulator Station	Dewey Avenue – 120 feet North of Driving Park Avenue	Expected Removal 2017
	4 in Wrought Iron Gas Main	Selye Terrace – West of Dewey Avenue, Left	
	2 in PE Gas Main	Selye Terrace – East of Dewey Avenue, Right	
	8 in Wrought Iron Gas Main	Broezel Street - Right	
RG&E Electric	Underground Electric Duct Bank	Driving Park Avenue, Right	
	Underground Electric Duct Bank	Driving Park Avenue @ Finch Street, Crossing	
	Underground Electric Duct Bank	Driving Park Avenue @ Dewey Avenue West, Crossing	
	Underground Electric Duct Bank	Dewey Avenue – North of Driving Park Avenue for 130 feet, Right	
	Underground Electric Duct Bank	Dewey Avenue – North of Driving Park Avenue, Left	
	Underground Electric Duct Bank	Dewey Avenue – South of Driving Park Avenue, Right	
	Underground Electric Duct Bank	Dewey Avenue – 160 feet South of Driving Park Avenue, Crossing / Left	
	Underground Electric Duct Bank	Broezel Street – South of Driving Park Avenue, Center	
	Overhead Electric	North of Driving Park Avenue, Behind Houses, West of Dewey Avenue	
Frontier Corporation	Underground Telephone Duct Bank	Driving Park Avenue, Left	
	Underground Telephone Duct Bank	Driving Park Avenue North to Utility Pole, Directly Across from Dewey Avenue West	
	Underground Telephone Duct Bank	Dewey Avenue – North of Driving Park Avenue, Left	
	Underground Telephone Duct Bank	Dewey Avenue – North of Driving Park Avenue for 120 feet, Left / Crossing	
	Underground Telephone Duct Bank	Broezel Street, Right	

Exhibit 2.3.3.9. Existing Utilities			
Owner	Type	Location & Side	Comment
Time Warner Cable	Underground Cable	Dewey Avenue – From Back Lot Utility Pole 165 feet north of Driving Park Avenue to North, Left	
	Underground Fiber Optic	Dewey Avenue – From Back Lot Utility Pole 165 feet north of Driving Park Avenue to North, Left	
	Overhead Cable	North of Driving Park Avenue, Behind Houses, West of Dewey Avenue	

2.3.3.10. Railroad Facilities – There are no railroads within the project limits and no at-grade crossings within ½ mile that could impact traffic conditions.

2.3.4. Potential Enhancement Opportunities

This section focuses on the existing areas to identify potential enhancement opportunities related to the project and to help avoid and minimize impacts. Chapter 4 focuses on the impacts, enhancements, and mitigation.

2.3.4.1. Landscape - Existing roadside landscaping generally consists of lawn and mature street trees planted within the snow storage areas on each approach to the offset intersection along the north leg of Dewey Avenue (east side) and the east and west approaches on Driving Park Avenue. The west side of Dewey Avenue, south of the intersection, generally consists of paved sidewalk from the curb line to the adjacent building line with an occasional street tree planted within a defined tree pit. North of the intersection, a community garden is maintained in the curb lawn area along the frontage of the Family Dollar store (northwest corner).

Mature street tree plantings along Dewey Avenue provide visual continuity for the corridor as it transitions from primarily residential to commercial as it approaches the intersection.

2.3.4.1. (1) Terrain – The terrain within the project limits is classified as rolling per Section 2.5.2 of the NYSDOT Highway Design Manual.

2.3.4.1. (2) Unusual Weather Conditions- There are no unusual weather conditions within the project area that would affect the design and construction of this project. Snow and ice events experienced within the project limits during the winter months are typical of New York State's Finger Lakes Region.

2.3.4.1. (3) Visual Resources - Dewey Avenue is a major north-south arterial that runs from Lyell Avenue in the heart of the City of Rochester to Lake Ontario in the Town of Greece. Within the city, from approximately Driving Park Avenue to Ridgeway Avenue, Dewey Avenue is a three lane roadway with a uniform mix of one and two story commercial, residential, and institutional buildings and land uses. Generally, there is a consistent setback and building line or edge for the corridor, with a few exceptions for larger stately buildings (Aquinas Institute) that have a greater set back with expansive lawn areas. Surrounding the project area is a tight grid network of pedestrian-oriented streets that make up the adjacent residential neighborhood. The building line is intact, with no or few voids created by missing buildings or street side parking lots.

The interruption of a long, straight segment of Dewey Avenue with the offset intersection at Driving Park Avenue creates a unique and memorable experience within the corridor. Vistas of travelers from the north and south terminate at the building line. The adjacent built environment has developed around the historic

street alignment, strengthening the 'sense of place' as a consequence of the offset intersection. The sharp contrast of the residential, tree-covered, narrow roadway on the east and west approaches on Driving Park Avenue with the open, 2 and 3 story commercial masonry building-lined intersection provides a sense of arrival and further reinforces the uniqueness of the intersection. These aspects of the project area (offset intersection, sense of arrival, terminated vistas) also have the secondary benefit of calming traffic.

2.3.4.2. Opportunities for Environmental Enhancements – The addition of streetscape elements (decorative lighting, specialty pavements, and street furniture) within the project area could enhance the commercial node at the offset intersection and make it friendlier to businesses, pedestrians and bicyclists. The area is currently dominated by vehicular accommodations and neglects the pedestrian and bicyclist to the detriment of the economic viability of adjacent structures. A more balanced approach supportive of all aspects of urban living is an opportunity for the project area.

The use of porous pavements or other sustainable ground covers other than lawn could help in reducing the amount of impervious surfaces and decrease the amount of urban runoff.

2.3.5. Miscellaneous –

None

CHAPTER 3 – ALTERNATIVES

This chapter discusses the alternatives considered and examines the engineering aspects of all feasible alternatives that address the project objectives stated in Chapter 1 of this report.

3.1. Alternatives Considered and Eliminated from Further Study

Alternative 1: No Action/Maintenance

The No Action/Maintenance or “null” alternative would retain the existing conditions at the Dewey Avenue and Driving Park Avenue intersection with no improvements other than routine maintenance activities. This would not improve multimodal mobility or safety at the intersection. This alternative does not satisfy the purpose and need of the project, however it has been retained as a baseline for comparison to the feasible alternative(s).

Alternative 2: Dewey Avenue Re-alignment, North and South Approach

This alternative would shift the northern Dewey Avenue approach west and the southern approach east creating one intersection between Dewey Avenue and Driving Park Avenue, eliminating the offset intersection. Multimodal mobility through the intersection would be enhanced by consolidating pedestrian street crossings to one location, closing the gap in the City’s bicycle lane network, and eliminating multiple turns for transit vehicles.

The relocated roadway would impact an existing commercial lot in the northwest corner of the intersection and a potentially historical commercial property in the southeast corner of the intersection. Former pavement areas at the western side of the intersection could be repurposed as a pocket park and community gathering space. This alternative would also improve aesthetics with streetscape and landscape features. In doing so the project would enhance the viability of this neighborhood node. All approaches to the intersection would have left turn lanes and the westbound approach on Driving Park Avenue would provide a right turn lane.

However, due to significant property acquisitions and anticipated impacts to potentially historical properties (Total Information/Maplewood Books) this alternative would increase the time necessary to secure design approval. This alternative would impact the commercial property (Total Information/Maplewood Books) which is eligible to be listed as historical properties. As a result this alternative was dropped from further consideration.

Alternative 3: Modern Roundabout

This alternative would create a single lane modern roundabout as a replacement for the current offset intersection. A roundabout would physically eliminate many of the conflicting vehicle movements. Pedestrian mobility at the intersection would be enhanced with highlighted, two-stage crossings. Multiple turning movements for transit vehicles would be eliminated. Bicyclists would benefit from lower vehicular travel speeds through the intersection.

A single lane roundabout would however, degrade the level of service provided to vehicular users, resulting in additional vehicular delay. It would negatively impact parking and opportunities to create a pocket park. It would require more property acquisitions as compared to other alternatives, both commercial and residential. Residential properties near Selye Terrace and a commercial property (Total Information/Maplewood Books) are eligible to be listed as historical properties. A multilane roundabout could alleviate the capacity concerns but would reintroduce a potential for weaving movements, lengthen pedestrian crossings, and expand anticipated parking and property impacts. Therefore, this alternative was dropped from further consideration.

3.2. Feasible Build Alternatives

3.2.1. Description of Feasible Alternatives

Alternative 4 - This alternative for the Dewey Avenue / Driving Park Avenue intersection would align the northern approach with the southern approach, eliminating the offset intersection. Multimodal mobility through the intersection would be enhanced by consolidating pedestrian street crossings to one location, closing the gap in the City's bicycle lane network, and eliminating multiple turns for transit vehicles. This alternative is consistent with the community's original vision.

The relocated roadway would impact an existing commercial lot in the northwest corner of the intersection. Former pavement areas at the western side of the intersection could be repurposed as a pocket park and community gathering space. This alternative would also improve aesthetics with streetscape and landscape features. In doing so, the project would enhance the viability of this neighborhood node. A summary of probable construction costs appears in Exhibit 3.2.1.

Key elements of this alternative include:

Geometry	<ul style="list-style-type: none">• Realign Dewey Avenue to eliminate the offset intersection. The north approach would be moved west to meet the south approach• The centerline of Driving Park Avenue would be shifted slightly north, allowing for the creation of pocket parking supportive of commercial properties along the southern curb line• Install curb extensions to define parking areas on Dewey Avenue and Driving Park Avenue• Install left turn lanes on all intersection approaches• Install a turning roadway to facilitate westbound to northbound turns• Provide a minor shoulder widening on the north side of Driving Park Avenue, west of the Dewey Avenue, to facilitate northbound to westbound truck turns• The northern leg of the intersection would include a series of reverse curves with a design speed of 25 miles per hour in an effort to minimize impacts to adjacent residential properties
Operational	<ul style="list-style-type: none">• Eliminate congestion associated with illegally parked vehicles in the eastbound curb lane between the two parts of the offset intersection during peak periods, thus improving level of service• Institute protected only operation for northbound left turns to mitigate the impact of curvature on the visibility of southbound through vehicles
Safety	<ul style="list-style-type: none">• Eliminate the existing pattern of sideswipe accidents that occurs today between the two parts of the offset intersection
Pedestrian	<ul style="list-style-type: none">• Replace existing sidewalk and curb ramps. Provide detectable warning surfaces at all crossing locations• Install pedestrian signals with countdown timers and push buttons for all signalized crosswalks• Install high visibility crosswalk markings, possibly in conjunction with colored, textured crosswalks, at the new intersection to highlight pedestrian crossing locations

Bicyclists	<ul style="list-style-type: none">• Extend the existing southbound bicycle lane on Dewey Avenue through the intersection• Retain the existing northbound bicycle lane and shared lane markings on Dewey Avenue south of the intersection• Re-establish the existing northbound bicycle lane on Dewey Avenue north of the intersection• Install shared lane markings on Driving Park Avenue eastbound and westbound within the project limits
Transit	<ul style="list-style-type: none">• Re-establish an existing bus stop on southbound Dewey Avenue just north of the intersection• Improve bus mobility by eliminating the need to make multiple turns between the offset intersection
Right of Way	<ul style="list-style-type: none">• Nine (9) Partial or Strip Permanent Easements• Temporary Easements for construction and/or grading• One (1) potential business relocation
Traffic Control & ITS	<ul style="list-style-type: none">• Install a new three color, actuated traffic signal at the consolidated intersection• Relocate existing Intelligent Transportation Systems features including closed circuit television cameras and system sensors• Relocate existing City of Rochester law enforcement equipment• Institute stop control on the turning roadway approach to Dewey Avenue
Pavement	<ul style="list-style-type: none">• Improve pavement conditions via full depth reconstruction within the project limits
Environmental	<ul style="list-style-type: none">• Improve aesthetics with streetscape and landscape features• Create an opportunity for a pocket park and/or outdoor community gathering space that can be used for formal or informal events• Relocate the existing Maplewood Community Gateway Garden to the proposed pocket park/community space
Cost	<ul style="list-style-type: none">• Total estimated construction cost of this alternative is \$2,196,640
Project Goals	<ul style="list-style-type: none">• These improvements satisfy the purpose, need and objectives stated in Chapter 1 of this document

Exhibit 3.2.1. Summary of Alternative Costs (2014 Dollars)	
Activities	Alternate 4 Costs
Roadway Reconstruction ¹	\$1,573,840
Subtotal 1	\$1,573,840
Incidentals ² (10%)	\$157,384
Subtotal 2	\$1,731,224
Contingency ³ (15%)	\$259,684
Subtotal 3	\$1,990,908
Field Change Payment (0%) ⁴	0
Subtotal 4	\$1,990,908
Mobilization (4%)	\$79,636
Subtotal 5	\$2,070,544
Expected Award Amount – Inflated ⁵ @ 3%/yr to midpoint of construction (2016 dollars)	\$2,196,640
Anticipated Construction Funding ⁶	\$1,905,000
Reimbursable Utility Costs ⁷	0
ROW Costs ⁸	\$1,217,000
Construction Inspection and Support ⁹	\$375,000
Total Project Costs	\$3,788,640

Notes:

1. Includes demolition of existing Family Dollar building and site. Does not include asbestos and hazardous waste / contaminated material remediation.
2. The potential cost increase due to unknown or un-tabulated items. Includes survey and work zone traffic control.
3. NYSDOT recommends a standard contingency of 15% at Design Approval stage.
4. Field Change Payment would be 5% per HDM Chapter 21 Section 21.4.3.3. However, this cost is included in the contingency.
5. An escalation rate of 3% has been included to account for potential future increases in labor, material, equipment, and other costs.
6. Anticipated construction budget in the NYSDOT STIP for Region 4.
7. Reimbursable utility costs not anticipated for this project.
8. ROW incidentals and acquisition to be paid for with Highway Safety Improvement Program and Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds. Cost is from Genesee Transportation Council (GTC) Transportation Improvement Program. Actual costs are pending appraisals and negotiations.
9. Anticipated construction inspection and support budget given in the STIP is \$222,000. Estimated cost shown in table. Actual cost to be negotiated during scoping for construction phase services agreement.

3.2.2 Preferred Alternative

Alternative 4 has been identified as the preferred alternative because it best satisfies the project purpose, need, and objectives. The layout of this alternative was initially developed by and is supported by the community. Selection of the preferred alternative will not be finalized until the alternatives' impacts, comments on the draft design approval document, and comments from the public have been fully evaluated. Conceptual color graphics of the preferred alternative are available in Appendix A.

3.2.3. Design Criteria for Feasible Alternative(s)

3.2.3.1. Design Standards -The design standards for this intersection safety improvement project are as follows:

- AASHTO A Policy on Geometric Design of Highways and Streets (Green Book) 2011
- NYSDOT Highway Design Manual (HDM)
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
- AASHTO Guide for the Development of Bicycle Facilities
- National Manual on Uniform Traffic Control Devices for Streets and Highways and the New York State Supplement (MUTCD)

3.2.3.2. Critical Design Elements – Exhibit 3.2.3.2-1 summarizes the critical design elements for Dewey Avenue. Exhibit 3.2.3.2-2 summarizes the critical design elements for Driving Park Avenue.

Exhibit 3.2.3.2-1 Critical Design Elements for Dewey Avenue					
PIN:		4755.55	NHS (Y/N):		No
Route No. & Name:		Dewey Avenue	Functional Classification:		Urban Minor Arterial
Project Type:		Major Intersection Reconstruction	Design Classification:		Urban Arterial
% Trucks:		6%	Terrain:		Rolling
ADT (2038):		13,730	Truck Access/Qualifying Hwy.		Yes / No
Element		Standard		Existing Condition	Proposed Condition
1	Design Speed	35 mph ¹ HDM Section 2.7.2.2 A		35 mph Design (30 mph Posted)	35 mph Design (30 mph Posted)
2	Travel Lane Width	11 ft Minimum 12 ft Minimum, 14 ft Desirable ² HDM Section 2.7.2.2 B, Exhibit 2-4		10 ft Min. 14 ft ²	11 ft Min. 14 ft ²
3	Turn Lane Width	11 ft Minimum, 12 ft Desirable (Left and Right) 11 ft Minimum, 16 ft Desirable (Two-way left-turn lanes) HDM Section 2.7.2.2.B, Exhibit 2-4		Left – 10 ft Two-way left-turn – 12 ft Min.	Left - 10 ft Min.
4	Parking Lane Width	8 ft Minimum, 12 ft Desirable HDM Section 2.7.2.2.B, Exhibit 2-4		8 ft	8 ft
5	Shoulder Width	Curb Offset, Left, Divided Arterials, 0 ft Minimum, 2 ft Desirable Curb Offset, Right ² - 0 ft Minimum, 4 ft Desirable Bicycle Lanes - 4 ft Minimum, 5 ft Desirable, 7 ft Maximum HDM Section 2.7.2.2.C, Exhibit 2-4; AASHTO Guide for the Development of Bicycle Facilities, Fourth Edition, 2012		Curb Offset, Right – 0 ft Min. Bicycle Lane - 4.0 ft Min.	Curb Offset, Right – 0 ft Min. Bicycle Lane – 5.0 ft
6	Maximum Grade	8% HDM Section 2.7.2.2.E, Exhibit 2-4		0.5%	0.4%
7	Horizontal Curvature	371 ft (@ e =4.0%) HDM Section 2.7.2.2.F, Table 2-4		0 ft	171 ft
8	Superelevation Rate	4% Maximum HDM Section 2.7.2.2.G		Normal Crown	Normal Crown
9	Stopping Sight Distance	250 ft Minimum HDM Section 2.7.2.2.H, Table 2-4		> 250 ft	172 ft
10	Horizontal Clearance	0 ft with barrier; 1.5 ft without barrier; 3 ft at intersections HDM Section 2.7.2.2.I		1 ft Min. without barrier	1.5 ft Min. without barrier
11	Travel Lane Cross Slope	1.5% Min. to 2% Max. HDM Section 2.7.2.2.K		1.5% to 2.5%	1% to 2%
12	Parking Lane Cross Slope	1.5% Min. to 5% Max. HDM Section 2.7.2.2.K		1.5%	2% Max.
13	Rollover	4% between travel lanes; 8% at edge of traveled way HDM Section 2.7.2.2.L		-	4% Max.
14	Pedestrian Accommodation	5 ft Minimum Sidewalk Width Complies with ADA Per NYSDOT HDM Chapter 18		5 ft sidewalk min.	5 ft sidewalk min.
(1) Existing off-peak 85 th percentile speed. (2) Wide travel lane adjacent to curbing or parking lane to accommodate bicyclists in low speed segments per HDM Section 2.7.2.2.B.. Exhibit 2-4, Note 2.					

Exhibit 3.2.3.2-2 Critical Design Elements for Driving Park Avenue					
PIN:		4755.55	NHS (Y/N):		No
Route No. & Name:		Driving Park Avenue	Functional Classification:		Urban Major Collector
Project Type:		Major Intersection Reconstruction	Design Classification:		Urban Collector
% Trucks:		6%	Terrain:		Rolling
ADT (2038):		10,640	Truck Access/Qualifying Hwy.		No / No
Element		Standard		Existing Condition	Proposed Condition
1	Design Speed	35 mph ¹ HDM Section 2.7.3.2 A		35 mph Design (30 mph Posted)	35 mph Design (30 mph Posted)
2	Travel Lane Width	10 ft Minimum, 12 ft Desirable 12 ft Minimum, 14 ft Desirable ² HDM Section 2.7.3.2 B, Exhibit 2-6		10 ft Min. 11 ft Min. ²	12 ft Min. 14 ft Typ. ²
3	Turn Lane Width	11 ft Minimum, 12 ft Desirable (Left and Right) 11 ft Minimum, 16 ft Desirable (Two-way left-turn lanes) HDM Section 2.7.3.2.B, Exhibit 2-6		Left - 11 ft	Left - 11 ft
4	Parking Lane Width	8 ft Minimum, 11 ft Desirable HDM Section 2.7.3.2.B, Exhibit 2-6		6 ft Min.	8 ft
5	Shoulder Width	Curb Offset, Left, Divided Collectors, 0 ft Minimum, 2 ft Desirable Curb Offset, Right ² - 0 ft Minimum, 4 ft Desirable Bicycle Lanes - 4 ft Minimum, 5 ft Desirable, 7 ft Maximum HDM Section 2.7.3.2.C, Exhibit 2-6; AASHTO Guide for the Development of Bicycle Facilities, Fourth Edition, 2012		Curb Offset, Right – 0 ft Min.	Curb Offset, Right – 0 ft Min. Left – 0 ft Min.
6	Maximum Grade	10% HDM Section 2.7.3.2.E, Exhibit 2-6		1.51%	1.51%
7	Horizontal Curvature	371 ft (@ e =4.0%) HDM Section 2.7.3.2.F, Table 2-6		None	None
8	Superelevation Rate	4% Maximum HDM Section 2.7.3.2.G		1% Reverse Crown	1% Reverse Crown
9	Stopping Sight Distance	250 ft Minimum HDM Section 2.7.3.2.H, Table 2-6		>250 ft	>250 ft
10	Horizontal Clearance	0 ft with barrier; 1.5 ft without barrier; 3 ft at intersections HDM Section 2.7.3.2.I		1 ft Min. without barrier	1.5 ft Min. without barrier
11	Travel Lane Cross Slope	1.5% Min. to 2% Max. HDM Section 2.7.3.2.K		1.0% Reverse Crown to 2.5%	1.0% Reverse Crown to 2%
12	Parking Lane Cross Slope	1.5% Min. to 5% Max. HDM Section 2.7.3.2.K		1.5%	2% Max.
13	Rollover	4% between travel lanes; 8% at edge of traveled way HDM Section 2.7.3.2.L		-	4% Max.
14	Pedestrian Accommodation	5 ft Minimum Sidewalk Width Complies with ADA Per NYSDOT HDM Chapter 18		5 ft sidewalk Min.	5 ft sidewalk Min.
(1) Existing off-peak 85 th percentile speed. (2) Wide travel lane adjacent to curbing or parking lane to accommodate bicyclists in low speed segments per HDM Section 2.7.3.2.B.. Exhibit 2-6, Note 2.					

3.2.3.3. Other Design Parameters -

Exhibit 3.2.3.3. - 1 Other Design Parameters: General		
Parameter	Standard Criteria	Proposed Condition
Level of Service	LOS D minimum LOS C desirable	LOS D minimum LOS C desirable
Drainage Design Storm	10 Year Storm	10 Year Storm

Vehicle Turning Paths at Intersection (i.e. Design Vehicle) - Vehicle turning paths were analyzed for Alternative 4 based on the ability of the design vehicle to complete various movements and all meet or exceed accommodations provided by the existing offset intersection. All turning movements would accommodate the design turning paths as indicated in Exhibit 3.2.3.3. – 2.

Exhibit 3.2.3.3. - 2 Other Design Parameter: Design Vehicle		
Location	Design Vehicle	Vehicle Accommodated
Dewey Ave NB to Driving Park EB	WB-40	WB-40
Dewey Ave NB	WB-67	WB-67
Dewey Ave NB to Driving Park WB	WB-67	WB-67
Driving Park WB to Dewey Ave NB	WB-40	WB-40
Driving Park WB	WB -67	WB-67
Driving Park WB to Dewey Ave SB	WB-40	WB-40
Dewey Ave SB to Driving Park WB	WB-67	WB-67
Dewey Ave SB	WB-67	WB-67
Dewey Ave SB to Driving Park EB	WB-40	WB-40
Driving Park EB to Dewey Ave SB	WB-40	WB-40
Driving Park EB	WB-67	WB-67
Driving Park EB to Dewey Ave NB	WB-67	WB-67

3.3. Engineering Considerations

3.3.1. Operations (Traffic and Safety) & Maintenance

3.3.1.1. Functional Classification and National Highway System - This project would not change the functional classification of any approach roadways.

3.3.1.2. Control of Access – Highway boundaries would remain “with access”.

3.3.1.3. Traffic Control Devices -

3.3.1.3. (1) Traffic Signals – All existing traffic signal equipment would be removed as part of the project. A new traffic signal is proposed at the realigned intersection of Dewey Avenue and Driving Park Avenue. The new signal would be fully actuated, with three-color traffic signal heads and pedestrian push buttons with hand/man indications and countdown timers at crosswalks. The signal design would meet current MUTCD and Monroe County Department of Transportation (MCDOT) standards. The signal would remain coordinated with the adjacent signals along Dewey Avenue. Replacement of the emergency signal preemption system would be discussed with the MCDOT and emergency service providers during detailed design. Refer to Section 3.3.1.4. for information on ITS elements within the project limits.

The two school flashing beacon assemblies would be replaced in kind if impacted by construction operations.

3.3.1.3. (2) Signs - Existing signs including but not limited to stop, regulatory, parking, and street name signs would be removed and replaced with new signs meeting current MUTCD standards. A new stop sign would be installed on the westbound turning roadway. The need for appropriate curve warning and speed advisory signs for the proposed Dewey Avenue alignment would be considered further during detailed design.

3.3.1.3. (3) Pavement Markings – New pavement markings would be installed throughout the project limits in accordance with the current MUTCD standards. Applicable NYSDOT and MCDOT standard details would be followed. Bicycle lanes along Dewey Avenue would be marked in accordance with national and City of Rochester guidelines. Additionally, the travel lanes on Driving Park Avenue and northbound Dewey Avenue on approach to the intersection would be marked with shared lane markings.

3.3.1.4. Intelligent Transportation Systems (ITS) – All existing ITS elements would be relocated or replaced at the realigned intersection as part of the project. This would include the MCDOT closed circuit television (CCTV) camera, MCDOT fiber optic cable / interconnect, and City of Rochester Police Department equipment. All work would be in accordance with the owner's current standards.

3.3.1.5. Speeds and Delay -

3.3.1.5. (1) Proposed Speed Limit - The City of Rochester speed limit of 30 miles per hour would remain in effect for all roadways within the project limits.

3.3.1.5. (2) Travel Time Estimates – The feasible alternative would not significantly impact travel distances or capacity, therefore travel time estimates were not calculated.

3.3.1.6. Traffic Volumes – See Section 2.3.1.6. (1) for more information on the design years, and development of average daily traffic (ADT) and peak hour turning movement volumes. The projected ADT volumes for Alternative 4 would be the same as those experienced under the no-build conditions. Alternative 4 peak hour turning movement volumes were developed from the no-build turning movement volumes by redistributing them to reflect the new intersection geometry. As noted in Chapter 2, field observations suggest approximately 85% of the traffic turning right off Dewey Avenue (northbound or southbound) subsequently turns left to stay on Dewey Avenue. Alternative 4 turning movement diagrams are presented in Appendix C, Exhibit 3.3.1.6.

3.3.1.7. Level of Service and Mobility – Refer to Section 2.3.1.7. for a discussion of Level of Service (LOS). Further information on LOS criteria is available in Exhibit 2.3.1.7. – 1 of Chapter 2. Synchro was used to assess the proposed alternative intersection. All signal timings and phasing were developed and optimized for the design year, 2038 (ETC+20). The same settings were retained for all other analysis years. All Synchro (output) reports are contained within Appendix C. Delay has been calculated and related to LOS using HCM definitions.

3.3.1.7 (1) At Project Completion & Design Year – Level of service analyses were completed for Alternative 4 at 2018 (ETC) and 2038 (ETC+20). An exhibit summarizing the AM and PM peak hour level of service and capacity analyses for the alternative conditions in comparison to the no-build conditions is provided in Exhibit 3.3.1.7. – 1.

In general, projected operations under Alternative 4 would be acceptable in 2018. The intersection would operate at LOS C overall during both the AM and PM peak hours. Only one lane group would experience LOS D or lesser conditions during peak hour periods. The northbound left turn movement would operate at LOS D with 39.3 and 50.8 seconds of delay per vehicle, during the AM and PM peak hours, respectively. This is as a result of the relatively low volume movement operating in a protected only mode. Protected only operation is required to mitigate obstructed sight lines. Southbound left turning vehicles are expected to obscure the view of southbound through movements. The level of service provided by Alternative 4 in 2018 is projected to be similar to that of the 2018 no-build conditions.

In 2038, projected operations at the proposed signalized intersection would continue to be acceptable with slight increases in delay and queuing as compared to 2018. Overall, the intersection would continue to operate at LOS C during the AM and PM peak hours, similar to the no-build conditions. Several movements would experience additional vehicle delay under 2038 conditions, however, all lane groups would operate at LOS D or better during both peak periods. In summary, the level of service provided by Alternative 4 in 2038 would be similar to that of the 2038 no-build conditions. Comparing to the 2038 no-build conditions when an eastbound through lane is blocked by on-street parking, significant improvement is seen in the Alternative 4 operations. The intersection would operate with all movements at LOS D or better during both peak hours instead of the LOS E and F conditions experienced under the blocked condition.

A total vehicle hours of delay (VHD) comparison was also completed for the project area considering Alternative 4 and no-build conditions. The comparison is presented in Exhibit 3.3.1.7. - 2 of Appendix C. Alternative 4 results in a 9 hour (25%) reduction in VHD over the AM and PM peak hours combined in 2038. When an eastbound through lane is blocked by on-street parking, Alternative 4 results in a reduction of 29 hours (51%) of corridor delay through the intersection. The elimination of the offset intersection and realigning Dewey Avenue to create a single signalized intersection would produce a substantial reduction in vehicle delay through the corridor, in particular along Dewey Avenue. This efficiency is derived from the fact that Dewey Avenue through traffic, estimated to be 85% of the northbound / southbound right turning volume, would have to pass through only one (1) signal under Alternative 4 instead of two (2) signals in the existing condition.

The use of a leading pedestrian interval, in order to enhance pedestrian safety, was reviewed to assess its impacts on the proposed traffic signal. Providing a leading pedestrian interval for the crosswalks parallel to Driving Park Avenue would result in the intersection operating at LOS D overall, with numerous lane groups operating at LOS D and E in the 2038 PM peak hour. If leading pedestrian intervals were added to all crosswalks at the intersection, several lane groups would operate at LOS E and F in the 2038 PM peak hour. These significant impacts to vehicular delay are a function of the coordinated cycle length limiting available signal green time. Therefore, leading pedestrian intervals were eliminated from further consideration.

Exhibit 3.3.1.7. - 1
Alternative Intersection Level of Service Summary

AM Peak Hour
7:15 AM to 8:15 AM

Intersection	Approach	Movement	2018 No-Build		2018 No-Build - EB Blocked Lane		2018 Alternative 4		2038 No-Build		2038 No-Build - EB Blocked Lane		2038 Alternative 4	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Dewey Avenue and Driving Park Avenue (WEST)	Eastbound	Thru	27.0	C	27.0	C			28.8	C	29.3	C		
		Right	6.5	A	6.5	A			8.2	A	8.2	A		
		Approach	20.9	C	20.9	C			22.6	C	23.0	C		
	Westbound	Left	15.0	B	14.9	B			19.4	B	19.3	B		
		Thru	8.3	A	8.3	A			8.4	A	8.4	A		
		Approach	11.9	B	11.8	B			14.3	B	14.3	B		
	Northbound	Left	18.0	B	18.0	B			20.5	C	20.5	C		
		Right	8.9	A	9.3	A			9.8	A	11.4	B		
		Approach	9.7	A	10.0	B			10.7	B	10.5	B		
	Overall		13.6	B	13.6	B			15.5	B	15.7	B		
Dewey Avenue and Driving Park Avenue / Broezel Street (EAST)	Eastbound	Left	9.9	A					17.3	B				
		Left/Thru/Right			16.7	B					41.1	D		
		Thru/Right	7.6	A					8.4	A				
	Westbound	Approach	9.0	A	16.7	B			13.6	B	41.1	D		
		Left/Thru	31.1	C	31.6	C			36.0	D	37.5	D		
		Right	5.4	A	5.4	A			7.4	A	7.4	A		
	Southbound	Approach	25.3	C	25.7	C			29.5	C	30.7	C		
		Left/Thru	50.4	D	50.4	D			55.0	E	55.0	E		
		Right	10.2	B	10.2	A			11.5	B	11.5	B		
	Overall		27.8	C	27.8	C			30.6	C	30.6	C		
Dewey Avenue and Driving Park Avenue	Eastbound	Left					23.0	C					26.1	C
		Thru/Right					22.5	C					26.2	C
		Approach					22.6	C					26.2	C
	Westbound	Left					22.0	C					24.2	C
		Thru					25.2	C					28.3	C
		Right					0.5	A					0.9	A
	Northbound	Approach					19.0	B					21.3	C
		Left					39.3	D					41.0	D
		Thru/Right					28.3	C					34.3	C
	Southbound	Approach					29.2	C					34.9	C
		Left					15.4	B					19.1	B
		Thru/Right					18.6	B					20.3	C
	Overall						17.2	B					19.8	B
	Overall						20.8	C					24.1	C

PM Peak Hour
4:45 PM to 5:45 PM

Intersection	Approach	Movement	2018 No-Build		2018 No-Build - EB Blocked Lane		2018 Alternative 4		2038 No-Build		2038 No-Build - EB Blocked Lane		2038 Alternative 4	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Dewey Avenue and Driving Park Avenue (WEST)	Eastbound	Thru	32.2	C	32.7	C			35.3	D	55.4	E		
		Right	11.9	B	11.9	B			13.7	B	13.7	B		
		Approach	28.6	C	29.1	C			31.5	C	48.1	D		
	Westbound	Left	11.2	B	11.0	B			13.7	B	13.5	B		
		Thru	6.3	A	6.3	A			5.7	A	5.8	A		
		Approach	8.8	A	8.7	A			9.8	A	9.7	A		
	Northbound	Left	25.9	C	25.9	C			29.9	C	29.9	C		
		Right	12.5	B	13.3	B			23.1	C	14.1	B		
		Approach	14.0	B	14.7	B			23.8	C	15.9	B		
	Overall		15.1	B	15.4	B			19.6	B	20.6	C		
Dewey Avenue and Driving Park Avenue / Broezel Street (EAST)	Eastbound	Left	11.0	B					23.2	C				
		Left/Thru/Right			21.4	C					84.6	F		
		Thru/Right	5.8	A					6.5	A				
	Westbound	Approach	9.1	A	21.4	C			17.0	B	84.6	F		
		Left/Thru	33.8	C	35.1	D			38.5	D	41.3	D		
		Right	9.6	A	9.6	A			13.3	B	13.3	B		
	Southbound	Approach	24.2	C	25.0	C			28.6	C	30.2	C		
		Left/Thru	48.8	D	48.8	D			49.3	D	49.3	D		
		Right	10.4	B	10.4	B			11.6	B	11.6	B		
	Overall		22.7	C	22.7	C			23.7	C	23.7	C		
Dewey Avenue and Driving Park Avenue	Eastbound	Left					28.0	C					41.1	D
		Thru/Right					27.9	C					37.3	D
		Approach					27.9	C					38.2	D
	Westbound	Left					23.8	C					28.1	C
		Thru					29.4	C					38.3	D
		Right					5.3	A					6.2	A
	Northbound	Approach					19.2	B					24.6	C
		Left					50.8	D					51.7	D
		Thru/Right					29.2	C					28.7	C
	Southbound	Approach					31.6	C					31.3	C
		Left					14.7	B					14.5	B
		Thru/Right					23.4	C					21.8	C
	Overall						20.6	C					19.5	B
	Overall						24.6	C					27.5	C

3.3.1.7 (2) – Work Zone Safety & Mobility –

A. Work Zone Traffic Control Plan -

All work zones would be set up in conformance with the MUTCD and NYSDOT HDM Chapter 16. A clearly marked travel way would be delineated with temporary pavement markings, traffic signage, barricades, drums, cones etc. as applicable while traffic is maintained through the intersection. Flaggers would be utilized to direct traffic where required. Access to affected residential and commercial properties would be maintained throughout construction or alternate accommodation would be provided. Access for emergency vehicles and local deliveries would also be maintained and open during construction.

Conceptual work zone traffic control schemes would allow the contractor to initially utilize one-way alternating traffic with flagging control during the day while maintaining vehicular traffic through the intersection to accomplish underground utility and drainage work along with the initial stages of approach reconstruction. No long term, full intersection closures with a detour are anticipated. The contractor could also complete sections of curbing and pavement along the new alignment of Dewey Avenue outside the existing roadway. This would allow the contractor to complete that work without interference from adjacent traffic. Traffic could then be transferred to the new sections of roadway which would provide adequate room to work and reduce conflicts for the traveling public.

Pedestrians would be accommodated within the project limits using existing, temporary, or new sidewalks. Bicyclists would continue to share the roadway with motor vehicles and be expected to follow posted work zone traffic control.

Details for work zone traffic control including any necessary intersection capacity analysis would be prepared during final design.

B. Special Provisions – Nighttime construction is not anticipated. Work zone traffic control would be coordinated with local officials, residents, utility owners, school districts, police, and local emergency service providers.

C. Significant Projects (per 23 CFR 630.1010) – This project is not classified as a Significant Project, therefore its Transportation Management Plan (TMP) would consist of a Temporary Traffic Control (TTC) plan consistent with 23 CFR 630.1012. To satisfy this requirement, the construction documents would include Work Zone Traffic Control notes, plans, and details. The requirements of Section 619 of the New York State Standard Specifications would apply to the contract

3.3.1.8. Safety Considerations, Accident History and Analysis – The proposed intersection realignment project would improve safety by simplifying travel through the area. The new configuration would enhance positive guidance given consistent lane assignments. The potential for bypass maneuvers and lane changes would also be removed eliminating the observed pattern of sideswipe and overtaking accidents. In addition, the removal of driveways close to the intersection along with a reduction in the number of travel lanes would improve safety by reducing conflict points and decreasing the potential for right angle accidents.

The potential use of Crash Reduction Factor's (CRF) and Crash Modification Factor's (CMF) to assess anticipated safety benefits at the intersection was reviewed, however it was determined that they would not be directly applicable due to the site specific environment and a lack of available calibration data. However, a review of the individual accidents and their contributing factors suggests that twenty (20) of the forty-three (43) documented collisions (over 3 years) could have been addressed by the removal of travel lanes, elimination of driveways, and the elimination of weaving movements between the offset intersections. Therefore, a 46% reduction in the accident potential could be anticipated to occur given the proposed change in intersection configuration. The NYSDOT Safety Information Management System suggests an average accident cost of \$39,700 per event. Therefore, the proposed intersection has the potential to reduce annual accident costs by up to \$260,000 per year on average.

An additional reduction in accident potential may be realized in conjunction with highlighted pedestrian crossings and a reduction in vehicle-bicycle conflict points. For example, as noted in Section 2.3.1.8, most of the pedestrian crashes took place in the crosswalk on the southern leg of Dewey Avenue. Presently southbound traffic approaching this crosswalk has to negotiate a left turn. Under the proposed condition, southbound traffic would have a straight path toward the crosswalk which should enhance intervisibility and thus reduce the probability of an incident.

The installation of curb extensions (bump outs) at the intersection would also improve sight lines for drivers and pedestrians at crossing locations, thus enhancing their intervisibility and safety for all modes of travel. The bump outs would be designed to accommodate turning trucks. Additionally, these features would visually narrow the street from the drivers' point of view, providing a traffic calming effect. The introduction of reverse horizontal curvature on Dewey Avenue just north of Driving Park Avenue may reduce speeds. The lower speeds and reduction of travel lanes should help vehicles entering the Selye Terrace intersection.

3.3.1.9. Impacts on Police, Fire Protection and Ambulance Access – Refer to Section 3.3.1.7 (2) for a discussion of the anticipated impacts during construction. Alternative 4 would have a long term impact on police, fire protection and ambulance access by facilitating easier navigation through the intersection for emergency response. As shown in Section 3.3.1.7 (1) a reduction in total vehicle hours of delay would reduce overall congestion at the intersection.

3.3.1.10. Parking Regulations and Parking Related Issues – Alternative 4 would result in a net reduction of sixteen (16) on-street parking spaces within the project limits. Parking in front of the commercial area along the south side of Driving Park Avenue would be protected by curb extensions. Parking would be provided in front of the pocket park along Dewey Avenue. Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG) (anticipated to be in effect by the time of construction) prescribe that all sections of on-street parking shall have a minimum number of marked, accessible parking spaces. Of the seven (7) remaining on-street parking spaces within the project limits, at least one would need to be an accessible parking space. Therefore, the proposed design includes an access aisle and separate curb ramp for the accessible parking space located along the east side of Dewey Avenue. Refer to Exhibit 2.3.1.10. in Appendix A for a map showing the impacted parking locations.

Initial concept plans for Alternative 4 considered building a community maintained off-street parking facility using the remainder of current Family Dollar property. The proposed facility would have been constructed by the City, however a Municipal Parking Lot Assessment District would be required to fund future maintenance activities. Outreach was conducted to adjacent business and property owners to gauge interest in the parking lot and Municipal Parking Lot Assessment District. No over whelming support for the construction of a new parking lot or creation of a Municipal Parking Lot Assessment District was received from the community. Therefore, the design of an off-street parking lot has been dropped from further consideration.

See the plans in Appendix A for the proposed location of both standard and accessible parking spaces.

3.3.1.11. Lighting – Street lighting under Alternative 4 would consist of ornamental fixtures consistent with those utilized on other roadway projects within the Maplewood Neighborhood. Lighting locations would be chosen to meet acceptable illumination standards during final design.

3.3.1.12. Ownership and Maintenance Jurisdiction – All agencies would continue ownership and maintenance responsibilities as outlined in Section 2.3.1.12. The City of Rochester would determine how the proposed pocket park/community space would be maintained during detailed design.

3.3.1.13. Constructability Review – There are no unique circumstances or design features that would negatively impact the constructability of the Alternative 4. The anticipated level of complexity would be considered routine. Portions of the alternative would be completed outside the existing travel

ways which would eliminate interference with existing traffic and allow the construction activities to be completed while enhancing the quality of the final product.

3.3.2. Multimodal

3.3.2.1. Pedestrians – New sidewalks would be provided throughout the proposed project area. With the elimination of the offset intersection, pedestrians would find a simplified intersection to navigate. Conflicts inherent in the existing traffic signal operation and crosswalk layout would be eliminated. High visual impact crosswalks would provide enhanced notification to the motorist of pedestrian crossing locations. Proposed pedestrian signal phases would be consistent with the direction of motor vehicle travel to reduce conflict between pedestrian and motor vehicles.

All new pedestrian facilities would be designed to current American Disability Act Accessibility Guidelines (ADAAG) and the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG) except as noted below. All sidewalks would have a minimum clear width of 4 feet. Sidewalks immediately adjacent to the roadway would have a minimum width of 7 feet. Directional curb ramps would be installed where possible. Detectable warning fields would be installed at all crossing locations according to City of Rochester and NYSDOT standards.

Several curb ramps along the south side of Driving Park Avenue may not be able to fully meet the above guidelines due to unavoidable physical site constraints (e.g. narrow constrained geometry, building faces, building accesses, etc.). They would however, strive to meet those guidelines to the greatest extent practicable. For example, it may be determined during detailed design that some of the clear walking paths between the proposed ramps and buildings / physical features cannot fully meet the PROWAG. One such location falls within the southeast corner of the Dewey Avenue and Driving Park Avenue intersection. The proposed preliminary design for this curb ramp would be incrementally better than the existing curb ramp, meeting all ADAAG / PROWAG guidelines with the exception of the clear walking width.

A marked pedestrian crossing of Driving Park Avenue at Broezel Street was repeatedly requested during the public outreach process. Community members felt this location would see significant use. However, a marked pedestrian crossing is not proposed at this location due to several safety concerns. These include pedestrians crossing through queued traffic in the westbound left turn lane, high traffic volumes on the westbound approach during the peak hours of operation, and the “midblock” with a signalized crossing only 160 feet to the west. The City of Rochester consulted with the MCDOT on the potential for a midblock crossing and that agency indicated it would not be in favor of its inclusion in the design. However, the proposed design would not preclude the installation of curb ramps and a marked pedestrian crossing from installation in the future if the volumes and crossing experience warrant.

Rochester Walks maintains a walking route with trailblazers and signage within the project limits. Coordination with that group would continue throughout detailed design and these features would be relocated or replaced to ensure the continued viability of the walking route.

3.3.2.2. Bicyclists – Bicycle lanes would be installed along Dewey Avenue as part of the project. The gap through the offset intersection would be eliminated, resulting in a fully connected bicycle lane in the southbound direction. In the northbound direction, the bicycle lane would transition to a shared lane just south of Driving Park Avenue for approximately 120 feet. The lack of available roadway width and right-of-way would prevent the continuation of the dedicated lane through this area. North of Driving Park Avenue, the northbound bicycle lane would restart, connecting up to the existing lane at the northern project limit.

Along Driving Park Avenue, bicycles would be expected to share the roadway with motor vehicles. Wide travel lanes would be provided and marked with shared lane markings.

Drainage basins would be equipped with bicycle friendly reticulate grates.

3.3.2.3. Transit – No changes are proposed that would affect existing Rochester Genesee Regional Transportation Authority (RGRTA) bus routes through the project limits. The existing bus stop and bus shelter on the Dewey Avenue north approach to Driving Park Avenue would be relocated to the new alignment (RTS Route 10). Bus stop landing pads would be installed at all existing and proposed bus stops impacted by construction. The proposed realignment would provide improved mobility for the transit buses given the elimination of the offset intersection. Transit buses, including articulated buses, would be accommodated by the proposed realignment.

3.3.2.4. Airports, Railroad Stations, and Ports – No changes are proposed that would affect airports, railroad stations, or port entrances.

3.3.2.5. Access to Recreation Areas (Parks, Trails, Waterways, and State Lands) – No changes are proposed that would affect access to recreation areas.

3.3.3. Infrastructure

3.3.3.1. Proposed Highway Section – Refer to Appendix A for plans and profiles covering the entire project corridor along with typical sections for Dewey Avenue and Driving Park Avenue. Additional details regarding the proposed sections under Alternative 4 are summarized in the following sections.

3.3.3.1. (1) Right of Way - Anticipated property acquisitions are summarized in Exhibit 3.3.3.1. (1). They are also shown on the plans in Appendix A. In summary, the proposed realignment would require seven (7) strip permanent easements and two (2) partial permanent easements. The strip permanent easements would primarily be needed to reconstruct and tie in proposed sidewalks to adjacent properties. In addition, there numerous temporary (construction) easements from property owners would be required to allow the installation and tie-in of sidewalks, parking lots, and driveway entrances.

The proposed realignment would impact an existing building, currently occupied by a Family Dollar retail store, located in the northwest corner of the intersection. The realignment would eliminate the existing building's parking lot and southern building façade. Temporary easements would be obtained for the remainder of the parcel(s) in order to facilitate the final disposition of the site, which may include building demolition.

The Family Dollar business could potentially be relocated, depending on the final disposition of the existing building. A conceptual stage relocation plan for this potential relocation is included in Appendix H. In summary, should Family Dollar need to relocate, there are numerous available buildings / parcels within the area to relocate to. The Family Dollar store is not the sole business of this type within the area. Other alternative service providers within walking distance include Price Rite in the southwest corner of Dewey Avenue and Driving Park Avenue and a Dollar General in the southeast corner of Driving Park Avenue and Lake Avenue. Throughout the public outreach process, as described in Chapter 1 and Appendix G, no formal comments were received regarding the potential Family Dollar relocation. The owner of Family Dollar has formally objected to the proposed realignment and subsequent impacts to their retail store.

Former roadway areas, contiguous to the roadway but vacated by the intersection realignment, would remain the property of the City of Rochester.

Exhibit 3.3.3.1. (1) Anticipated Right-of-Way Acquisitions				
Number	Address / Location	Reputed Owner Tax #	Type of Acquisition	Estimated Acquisition Area (SF)
1	828-830 Dewey Avenue	Zhoubu Ni 090.820-0001-034.000	Temporary Easement	48.3
2	875 Dewey Avenue	9274 Group Inc. 090.820-0001-015.000	Partial Permanent Easement / Entire Temporary Easement	1,104.5 / 3,575.6
3	877 Dewey Avenue	Isaac Benjamin 090.820-0001-014.000	Strip Permanent Easement / Temporary Easement	139.5 / 225.2
4	881 Dewey Avenue	Homes by Helen LLC 090.820-0001-013.000	Strip Permanent Easement	78.0
5	308 Driving Park Avenue	Michael E Toombs 090.820-0002-048.000	Temporary Easement	84.0
6	310 Driving Park Avenue	Family Irrevocable Trust 090.820-0002-049.000	Temporary Easement	84.1
7	315 Driving Park Avenue	Hudson Driving Garson LLC 090.820-0002-040.000	Strip Permanent Easement	29.2
8	320 Driving Park Avenue	Clinton E Dixon 090.820-0002-050.000	Temporary Easement	1,198.2
9	321-331 Driving Park Avenue	321 Driving Park Associates Inc. 090.820-0001-023.000	Strip Permanent Easement	15.8
10	343 Driving Park Avenue	Total Information Inc. 090.820-0001-020.000	Strip Permanent Easement	10.9

Exhibit 3.3.3.1. (1) Anticipated Right-of-Way Acquisitions				
Number	Address / Location	Reputed Owner Tax #	Type of Acquisition	Estimated Acquisition Area (SF)
11	354 Driving Park Avenue	9274 Group Inc. 090.820-0001-036.001	Partial Permanent Easement / Entire Temporary Easement	15,054.1 / 14,054.7
12	368-370 Driving Park Avenue	Joseph M. DiJune 090.820-0001-038.000	Strip Permanent Easement / Temporary Easement	199.8 / 192.6
13	373-375 Driving Park Avenue	ARC PRRCRNY001 LLC 090.820-0001-035.001	Strip Permanent Easement (2) / Temporary Easement	184.9 / 1,434.6
14	374-376 Driving Park Avenue	Scott Ruthven 090.820-0001-039.000	Strip Permanent Easement / Temporary Easement	79.2 / 80.8
15	380 Driving Park Avenue	Thanh Trieu 090.810-0002-028.000	Strip Permanent Easement / Temporary Easement	34.8 / 125.3

3.3.3.1. (2) Curb – Vertical face 7 ½ inches high stone curb would be provided throughout the reconstruction area. Stone curb would extend across all driveways with a standard drop curb reveal of 1 ½ inches.

3.3.3.1. (3) Grades – All maximum grades throughout the project limits would be in accordance with the standards contained in Section 3.2.3.2. Refer to the profiles in Appendix A for detailed grade information.

3.3.3.1. (4) Intersection Geometry and Conditions – Refer to the plans in Appendix A for the geometry of the proposed intersection. This project would replace the two offset 3-legged tee intersections with a single 4-legged intersection. Driving Park Avenue would pass through the intersection primarily on its existing alignment. The southern Dewey Avenue approach would intersect Driving Park Avenue at a 90 degree angle. The northern approach would extend radially in the northeast direction away from Driving Park Avenue using a series of horizontal curves before reaching the existing alignment. The westbound Driving Park Avenue approach would include a turning roadway to enter at a 90° angle to Dewey Avenue.

The current design shows an optimal (balanced) location for the westbound Driving Park Avenue to northbound Dewey Avenue turning roadway. Several options were reviewed during preliminary design including integrating the movement into the signalized intersection and providing a channeled right turn lane with various forms of traffic control. The current westbound turning roadway would provide an acceptable northbound stopping sight distance for 30 mph (219 feet design verses the 200 foot standard). As previously noted, a 30 mph speed limit applies to City of Rochester Streets. The MCDOT agreed that this value would be acceptable in balancing design constraints. This would allow a northbound driver to see a vehicle if it happens to pull out in front of them from the westbound right turning roadway. Additionally, the location of the turning roadway minimizes impacts to intersection level of service and

adjacent properties. Intersection sight distance for the westbound right turn movement would be 200 feet adequate for an approach speed of 20 mph. This is the maximum intersection sight distance provided amongst all potential options reviewed. Refer to Section 3.3.3.2. (2) for more information on the intersection sight distance.

3.3.3.1. (5) Roadside Elements -

- (a) Snow Storage – Snow Storage would be accommodated in the curb lawn areas and the first 2 feet of sidewalk where immediately adjacent to the curb. The proposed curb lawn varies from 0-9 feet wide. Refer to the plans in Appendix A for proposed curb lawn areas.
- (b) Sidewalks – Concrete sidewalk would be installed along all roadways throughout the project limits. Standalone sidewalks would generally be 5 to 8 feet wide. Sidewalks adjacent to commercial buildings are generally full width from curb to face of building and approximately 9 to 17 feet wide. Refer to the plans in Appendix A for the location of proposed sidewalks.
- (c) Utility Strips – No new utility strips are anticipated within the project limits
- (d) Bikeways – No new bikeways or shared use paths are proposed within the project limits. Refer to Section 3.3.2.2 for information on proposed bicycle lanes.
- (e) Bus Stops – No new bus stops are planned. One existing bus stop with shelter would be relocated from the existing alignment along southbound Dewey Avenue to the realigned intersection approach. The remaining four (4) existing bus stop locations within the project limits would be adjusted during detailed design and construction in coordination with RGRTA.
- (f) Driveways - All driveways proposed to remain within the project limits would be replaced in kind as necessary to tie into the proposed work. All driveways would be designed to comply with current City of Rochester driveway standards. Refer to the plans in Appendix A for proposed driveway locations and layout.

3.3.3.2. Special Geometric Design Elements -

3.3.3.2. (1) Non-Standard Features – Critical design elements within the study limits that would not comply with the geometric features and cross section elements listed in Section 3.2.3.2. are described below. Non-standard feature justification forms are included in Appendix F.

Horizontal Curve Radius: The proposed horizontal curves on Dewey Avenue have a radius of 171 feet and a normal crown superelevation. This is less than the 371 feet standard at 4.0% superelevation. Significant additional right-of-way acquisitions would be required in order to fully meet standards. No speed related safety issues are anticipated with this non-standard feature given the low speed urban environment. The installation of curve warning and advisory speed signs would be considered in detailed design to mitigate this feature.

Turn Lane Width: The existing left turn lane on Dewey Avenue northbound at Driving Park Avenue would be maintained at 10 feet wide. This is less than the standard minimum value of 11 feet. Additional pavement widening and impacts to Price Rite's adjacent off-street parking lot would be required in order to meet standards. The widening would be constrained by the Price Rite building and therefore be short and inconsistent with adjacent segments of Dewey Avenue. There are no existing safety issues associated with this non-standard feature, therefore no mitigation is proposed.

Stopping Sight Distance: The proposed horizontal curve along Dewey Avenue in conjunction with the existing Total Information building limits horizontal sight distance to 172 feet northbound just south of the intersection with Driving Park Avenue. This is less than the standard value of 250 feet at a design speed of 35 mph. A stopping sight distance of 172 feet meets the standard for 25 mph. Significant additional right-of-way acquisitions from potentially historic properties would be required in order to fully meet standards. No speed related safety issues are anticipated with this feature given the low speed urban

environment. The installation of curve warning and advisory speed signs would be considered in detailed design to mitigate this feature.

3.3.3.2. (2) Non-Conforming Features – The following non-conforming features would exist within the project limits:

- Intersection sight distance (ISD) for the westbound Driving Park Avenue to northbound Dewey Avenue turning roadway: The required ISD for the stop controlled movement would be 335 feet (passenger car) in accordance with the NYSDOT Highway Design Manual, Chapter 5. The available ISD would be approximately 200 feet, adequate for an approach speed of 20 mph, due to the building façade in the southeast corner blocking the view of vehicles traveling northbound.
- Shifting taper length (travel lane) for northbound Dewey Avenue, south of Driving Park Avenue: The shifting taper length on Dewey Avenue northbound, transitioning from a single travel lane to a left turn lane and through-right travel lane, would be 50 feet. The minimum taper length according to standard practice would be 102.5 feet. Extending the taper would impact two (2) on-street parking spots that currently serve an adjacent barber shop. Keeping the taper shorter would allow the bicycle lane to terminate as close as possible to the intersection while still providing sufficient storage space for the northbound Dewey Avenue left turn lane. This transition would be similar to the existing conditions.
- Shifting taper length (bicycle lane) for northbound Dewey Avenue, south of Driving Park Avenue: The shifting taper length for the northbound Dewey Avenue bicycle lane would be 25 feet. This is related to the shorter than desired travel lane shifting taper in the same location. The minimum taper length according to standard practice would be 64 feet. Extending the taper would impact the two (2) on-street parking spots noted above.
- Sidewalk clear width and overall curb ramp layout: The layout of several curb ramps along the south side of Driving Park Avenue would be constrained by unavoidable urban site conditions. It may be determined during detailed design that some features of these ramps or adjacent sidewalk cannot practically meet the ADAAG or PROWAG guidelines. Refer to Section 3.3.2.1 for more information.

The following atypical elements would exist in the proposed design, within design standards, but departing from normal practice:

- A wide (8 foot) shoulder in northwest corner of the proposed intersection designed to accommodate a northbound left turning WB-67.
- Wider than normal (14 foot) travel lanes along Dewey Avenue, north of Driving Park Avenue, to accommodate WB-67 off-tracking along the horizontal curves.
- Driving Park Avenue, between Broezel Street and the eastern project limit, would have a 1% reverse crown pavement slope. This matches the existing condition and is required in order to property tie in the back edge of sidewalk with the existing grades.

3.3.3.3. Pavement and Shoulder – A hot mix asphalt (HMA) pavement section is proposed for Alternative 4. As discussed in the Pavement Evaluation and Treatment Selection Report (PETSr) of Appendix D, a full depth pavement section is recommended due to the proposed intersection realignment and to address existing deficiencies on Driving Park Avenue.

The City of Rochester uses a standard HMA pavement section for all roadways within the City. This section was verified against a section calculated per the Equivalent Single Axle Loading (ESAL) pavement design procedure as outlined in the NYSDOT Comprehensive Pavement Design Manual. The expected pavement surface life would be 20 years with an expected total pavement service life of 50

years. The following City of Rochester standard HMA pavement section would meet the expected service life:

- 1.5 inch HMA Top Course
- 2.0 inch HMA Binder Course
- 8.0 inch HMA Base Course (2 lifts)
- 11.0 inch Granular Subbase Course

All pavement from curb to curb and in parking lanes would be constructed to the same section as above.

3.3.3.4. Drainage Systems – Standard drainage design practices (i.e. 10-year design storm calculations for closed drainage systems) would apply to this project. The proposed intersection realignment would result in a net overall reduction to the impervious area within the project limits. The existing combined sewer system trunk lines would be retained as they are in good condition. The proposed drainage system would follow the same general patterns present under existing conditions. As a result, the quantity of storm water conveyed into the existing combined sewer systems would remain similar.

Existing drainage inlets would be relocated and replaced to accommodate proposed curb line modifications. New drainage inlets would be installed where required. Reconnection to the existing trunk line would be done either at existing lateral locations or at new locations as appropriate. A new trunk line would be installed along the realigned Dewey Avenue and tie into the existing system. Bicycle friendly reticuline grates would be used throughout the project limits. Frames and covers of existing manholes to remain would require adjustment. Existing drainage elements to remain would be cleaned prior to project completion.

A drainage report would be completed during detailed design. This report would document the analysis performed to determine the final drainage design.

3.3.3.5. Geotechnical – No special geotechnical techniques or considerations are anticipated within the project limits that would affect design or construction.

3.3.3.6. Structures – There are no proposed bridges within the project limits.

3.3.3.7. Hydraulics of Bridges and Culverts – There are no proposed bridges or culverts within the project limits.

3.3.3.8. Guide Railing, Median Barriers and Impact Attenuators – No guide rail, median barrier, or impact attenuators would be used within the project limits.

3.3.3.9. Utilities – Limited public and private utility relocations would be required in order to complete the proposed construction. Water valve boxes / curb stops, gas valve boxes, electric manhole/valve covers, and communication manhole covers would require adjustment to meet proposed grades. All adjustments except the water valve boxes / curb stops would be completed by the respective utility companies. Potential utility impacts, improvements, and relocations are summarized in Exhibit 3.3.3.9. In general, all impacted private utilities are within the existing highway boundary and relocations / improvement costs are anticipated to be non-reimbursable.

The Rochester Water Bureau has indicated that all lead or galvanized water services within the project limits should be replaced under the project. Additionally, all fire hydrants that are not breakaway type should so be replaced under the project. Elements not directly impacted by the project design would be handled as a betterment share.

The MCDOT has an agreement with RG&E that previously allowed them to run communication cables inside of their duct banks. However, when roadway reconstruction is planned and signal infrastructure

replaced, existing lines must be removed from the duct banks within the roadway project's work limit. Therefore existing fiber optic interconnect lines would be relocated as part of this project.

RG&E Gas has plans to remove their existing regulating station in the northwest corner of the intersection of Driving Park Avenue and Dewey Avenue east. This work will occur after gas main improvements are completed along various side streets northwest of the project area. It is expected to be complete by 2017.

Depths of existing electric, communication, and gas lines would be checked against the proposed plans during detailed design. At this time, RG&E Electric, RG&E Gas, and Frontier Corporation do not anticipate any relocations of their facilities would be necessary.

Exhibit 3.3.3.9. Location of Potential Utility Impacts				
Owner	Type	Location & Side	Length (ft)	Impact
Rochester Water Bureau	Water Services (Lead or Galvanized)	Throughout Project Limits	NA	System Upgrade
	Fire Hydrants (Non-breakaway)	Throughout Project Limits	NA	System Upgrade
Monroe County Department of Transportation	Underground Fiber Optic Cable	Driving Park Avenue – Between Dewey Avenue West and Dewey Avenue East, Right	NA	Relocate Outside of RG&E Duct Bank, In conjunction with Proposed Signal Improvements
Time Warner Cable	Underground Fiber Optic Cable / Underground Cable	Dewey Avenue – 175 feet north of Driving Park Avenue, Left, at Vault	Unknown	Conduit Relocation and Vault Replacement for Full Depth Pavement Section
RG&E Gas	Gas Main Regulator Station	Dewey Avenue – 120 feet North of Driving Park Avenue	NA	Expected Removal by RG&E by 2017

3.3.3.10. Railroad Facilities – There are no railroads within the project limits and no at-grade crossings within ½ mile that could impact traffic conditions

3.3.4. Landscape and Environmental Enhancements –

3.3.4.1. Landscape Development and Other Aesthetics Improvements – Multiple landscape features could be included in the project to provide aesthetic improvements. The project could incorporate the use of colored and textured concrete to visually enhance areas adjacent to standard concrete sidewalks. These treatments could also include high visibility or colored and textured crosswalks to not only improve aesthetics but also overall safety at the crossings. Ornamental street lighting in a style matching existing Maplewood neighborhood lighting could be installed in both post top (pedestrian scale) and standard fixtures. Softscape elements would be included in the project including trees and lawn restoration. These items would be used to restore disturbed areas and provide visual enhancements throughout the project limits.

3.3.4.2. Environmental Enhancements – During community outreach, the public communicated a desire to incorporate a community area or pocket park into the project. The community expressed the need to include a flat event space for formal and informal gatherings. They suggested the use of permeable treatments including pavers, concrete, or other plantings (i.e. not lawn) as appropriate. The

overall feel of the pocket park should be light and airy with limited vertical features to maximize usable space.

This pocket park could be added to the northeast corner of Dewey Avenue in the residual space left over from the new compound curve added to consolidate the intersection. This pocket park would be designed with a variety of hardscape/landscape options depending upon available resources, neighborhood involvement / commitment, and long term maintenance provisions. Proper design would ensure that the buildings still retain a relationship to the public right-of-way, and that pedestrian circulation remains in clear sight with no hidden or obscured sections. This pocket park would also provide a location for the relocation of the community garden that currently exists in the ROW in front of the Family Dollar store. Construction of the pocket park would depend on the availability of adequate funding.

3.3.5. Miscellaneous

3.3.5.1. NYS Smart Growth Public Infrastructure Policy Act (SGPIPA) - Pursuant to ECL Article 6, this project is compliant with the New York State Smart Growth Public Infrastructure Policy Act (SGPIPA).

To the extent practicable this project has met the relevant criteria as described in ECL § 6-0107. The Smart Growth Screening Tool was used to assess the project's consistency and alignment with relevant Smart Growth criteria. The tool was completed by the City of Rochester's design consultant and reflects the current project scope. A copy of the Smart Growth Screening Checklist is provided in Appendix I.

3.3.5.2. Complete Streets – The New York State "Complete Streets Act" requires all state, county, and local agencies including the NYSDOT to consider the convenience and mobility of all users when developing transportation projects that receive federal and state funding. The improvements proposed under Alternative 4 are consistent with this policy.

CHAPTER 4 - SOCIAL, ECONOMIC & ENVIRONMENTAL CONDITIONS and CONSEQUENCES

4.1. Environmental Classification

4.1.1. NEPA Classification -

After completion of the Federal Environmental Approval Worksheet (included in Appendix B) it has been determined that the project is a Class II Categorical Exclusion. This project meets the description of 23 CFR 771.117(d); "Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing)." This is because it would not cause a significant environmental impact, either individually or cumulatively. As a Categorical Exclusion, the project is exempt under NEPA from the requirement to prepare an Environmental Impact Statement (EIS) or an Environmental Assessment (EA).

4.1.2. SEQR Classification -

The City of Rochester is the Lead Agency for review under the State Environmental Quality Review regulations, 6 NYCRR Part 617. The City has classified the project as a SEQR Unlisted Action in accordance with 6 NYCRR 617. Part I of a Short Environmental Assessment Form (EAF) has been prepared for the project, and is included in Appendix B, and was reviewed by various City Departments. Following review, Part II of the Short EAF was completed along with a decision document for the SEQR process.

4.2. Environmental

4.2.1. Wetlands -

4.2.1.1. State Freshwater Wetlands - There are no New York State Department of Environmental Conservation (NYSDEC) regulated freshwater wetlands or regulated adjacent areas (100 feet) within the project area, as per the NYSDEC Freshwater Wetlands Maps. A NYSDEC Article 24 Freshwater Wetlands Permit is not required. No further investigation is required under Environmental Conservation Law, Article 24.

4.2.1.2. Federal Jurisdiction Wetlands - The project site has been reviewed for wetlands in accordance with the criteria defined in the 1987 US Army Corps of Engineers Wetland Delineation Manual and Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region. It has been determined the project would not impact areas that meet this criteria. A NYSDEC Section 401 Water Quality Certification and a U.S. Army Corps of Engineer (USACE) Section 404 Permit would therefore not be required for this project

4.2.2. Surface Waterbodies and Watercourses -

4.2.2.1. Surface Waters - The project area was screened for surface waters and NYSDEC Surface water classifications. Based upon a review of the NYSDEC GIS data maps for regulated streams, and on the United States Geological Survey (USGS) quadrangle map of the project area, there are no surface waterways within the proposed project limits. Therefore, no USACE Section 404 permit, NYSDEC Article 15 permit, or NYSDEC Section 401 Water Quality Certification would be required for this project.

4.2.3. Wild, Scenic, and Recreational Rivers -

4.2.3.1. State Wild, Scenic and Recreational Rivers - There are no NYSDEC Designated, Study or Inventory State Wild, Scenic or Recreational Rivers within or adjacent to the proposed project site. No further review is required.

4.2.3.2. National Wild and Scenic Rivers – The project does not involve a National Wild and Scenic River as shown by the Nationwide Rivers Inventory List of National Wild and Scenic Rivers. No further review is required.

4.2.3.3. Section 4(f) Involvement – The proposed project does not involve work in or adjacent to a wildlife or waterfowl refuge. No further consideration is required.

4.2.4. Navigable Waters –

There are no state or federally regulated navigable waters located within the project's area of potential effect that would be impacted by the work.

4.2.5. Floodplains -

The project area is covered by Map Number 36055C0192G of the Flood Insurance Rate Map for Monroe County, New York, effective date August 28, 2008. The map shows that the project lies outside the 100-year flood zone. It is concluded that none of the project area is subject to floodplain regulations.

4.2.6. Coastal Resources -

4.2.6.1. State Coastal Zone Management Program - The proposed project is not located in a State Coastal Zone Management (CZM) area, according to the Coastal Zone Area Map from the NYS Department of State's Coastal Zone Management Unit.

4.2.6.2. State Coastal Erosion Hazard Area - The proposed project is not located in or near a Coastal Erosion Hazard Area.

4.2.6.3. Waterfront Revitalization and Coastal Resources Program - The City of Rochester has an approved Coastal Local Waterfront Revitalization Program (LWRP); however, the project area is not located in a Local Waterfront Revitalization Area. No further action is required.

4.2.7. Groundwater Resources, Aquifers, and Reservoirs -

The project area is not located over any NYSDEC primary or principal aquifer areas defined by the NYSDEC Technical and Operational Guidance Series (TOGS) 2.1.3. The project area is located in a residential and commercial section of the City supported by a municipal water distribution system (See Section 2.3.4.9). The proposed project is not expected to have any adverse impacts on groundwater or drinking water resources.

A review of the EPA-designated Sole Source Aquifer Areas Federal Register Notices, Maps, and Fact Sheets indicates that the project is not located in a Sole Source Aquifer Project Review Area. No federal review and/or approvals are required pursuant to Section 1424(e) of the Safe Drinking Water Act.

4.2.8. Stormwater Management -

As noted in Section 2.3.3.4, stormwater in the project area is collected by a system of catch basins and a closed drainage system that is served by a combined (storm and sanitary) sewer system that flows to a wastewater treatment facility operated by Monroe County Pure Waters prior to being discharged into Lake Ontario under an existing SPDES permit. It is therefore anticipated that coverage would not be required under the NYSDEC SPDES General Permit for Stormwater Discharged from Construction Activities (GP-0-10-001). The project design would be coordinated with Monroe County Pure Waters.

Erosion and sedimentation control measures would be incorporated into the project. Erosion and sedimentation control plans would be developed with control erosion with straw or hay mulch, erosion control fabric, and/or temporary seeding, and control sedimentation with silt fence, inlet protection, and temporary sedimentation/detention ponds as necessary. No permanent stormwater management practices would be incorporated into the project since a SPDES permit is not required and it is not practicable for the site conditions.

4.2.9. General Ecology and Wildlife Resources -

4.2.9.1. General Ecology and Vegetative Communities – The project area is located in an urban commercial and residential area and is characterized by buildings and houses with sidewalks and curb lawns composed of asphalt and concrete. There are some landscaping treatments on adjacent property, including small lawns, planters, landscape beds, shrub rows, and trees. The terrain of the corridor is rolling. No surface water or wetland habitats for fish, wildlife, or waterfowl exist in the vicinity of the project. Such a disturbed site in a high traffic area within an urban landscape results in limited access and foraging opportunities for most species of wildlife.

4.2.9.2. Endangered and Threatened Species -

In a letter dated April 7, 2014, the NYSDEC New York Natural Heritage Program stated that they “have no records of rare or state-listed animals or plants, or significant natural communities, at your site or in its immediate vicinity.” A copy of this letter is included in Appendix B.

A review of the United States Fish and Wildlife Service (USFWS) Information, Planning and Conservation (IPAC) System of federally threatened and endangered species (listed and proposed species) lists the federally threatened species, bog turtle (*Clemmys muhlenbergii*). It also included the proposed endangered Northern long-eared bat (*Myotis septentrionalis*).

The bog turtle is a semi-aquatic species. The bog turtle prefers open, sunny, spring fed wetlands in muck soils with scattered dry areas. The bog turtle is generally found in “mucky” open areas with high amounts of sunlight for basking and nesting. Since the project area is urban, with no wetlands or surface waters near the project site, there is no suitable habitat for the bog turtle.

In November 2013, the USFWS announced the proposed listing of the northern long-eared bat (NLEB) in October 2014, which will require the review of any tree removals greater than 3” diameter breast height (dbh) as suitable roosting habitat. Suitable habitat is defined as trees providing gaps underneath bark, in cavities, or in crevices of both live and dead trees. Other roosting locations include caves, mines and occasionally in barns and sheds. It should be noted that the “Northern Long-eared Bat Interim Conference and Planning Guidance” of January 6, 2014 notes on page 3 that “trees found in highly-developed urban areas (e.g. street trees, downtown areas) are extremely unlikely to be suitable NLEB habitat.” During this interim period a biological evaluation of all tree removals has been conducted. In order to reduce the potential to impact this species, tree removals could be completed during the approved winter cutting window of October 1 to March 31. At this time, it is estimated that 22 trees over 3 inches dbh would be removed as shown on Exhibit 4.2.9.2.

Exhibit 4.2.9.2 Estimated Number of Trees to be Removed.		
Quadrant	Number	Size/Type
NW	1	42" Maple
NE	1	24" Maple
NE	1	18" Maple
NE	1	16" Maple
NE	2	14" Maple
NE	1	10" Maple
NW	2	8" Maple
NW	1	6" Maple
NW	1	42" Hickory
NW	2	16" Locust
NW	1	14" Locust
SW	1	14" Crabapple
SW	1	12" Crabapple
SW	1	10" Crabapple
NW, SW	2	8" Crabapple
SW	1	6" Crabapple
SW	2	4" Crabapple
Total	22	

It is assumed that the proposed project will have a "May Affect, not likely to adversely Affect" determination on this new proposed listed species. Consultation with Federal Highway Administration (FHWA) and USFWS is ongoing.

4.2.9.3. Invasive Species - This project is located within an urbanized area with maintained lawns and no natural adjacent areas or parks. A review of the project area did not indicate any significant presence of known invasive species. Precautions would be taken to prevent the introduction of invasive species during project design and construction.

4.2.10. Critical Environmental Areas -

According to information obtained from NYSDEC, the proposed project would not involve work in or near a Critical Environmental Area.

4.2.11. Historic and Cultural Resources –

The proposed project is located in an archaeologically sensitive area. However, all proposed excavations would take place within existing pavement/sidewalk areas or other areas previously disturbed by construction activities within the last 20 years.

A Project Review Package was prepared for review by the NYSDOT Region 4 Regional Cultural Resource Coordinator (CRC). In a memorandum dated May 22, 2014, the Regional CRC concluded that "the project activities have no potential to cause effects on historic properties in accordance with 36 CFR 800.3(a)(1) therefore, there are no further obligations for compliance with Section 106 of the National Historic Preservation Act." A copy of the memorandum is included in Appendix B. Therefore, proposed project would have no impact on potentially eligible historic properties, including archaeological resources.

Since the project would not affect properties on, or eligible for, the National Register of Historic Places, or properties over 50 years old that may be eligible within the project's area of potential effect, a Section 4(f) evaluation for historical resources is not required.

4.2.12. Parks and Recreational Resources -

There are no parks or recreational areas located within the project area. No land from any park or recreation area would be affected by this project. A Section 4(f) Evaluation (49 USC 303 of the U. S. Department of Transportation Act) for parks and recreational resources is therefore not required (See Section 4.2.11 regarding Section 4(f) for historic resources).

The project would not impact parklands or facilities that have been partially or fully federally funded through the Land and Water Conservation Act. No further consideration under Section 6(f) is required.

4.2.13. Visual Resources –

The preferred alternative would introduce a curvilinear roadway feature into a generally rectilinear urban grid street network. The tight compound curve used to consolidate the intersection would represent a departure from the predominant surrounding pattern. The existing offset intersection is unique and lends a degree of traffic calming on a human scale to this urban node. This would be altered given the intersection realignment, however the number of buildings removed would be minimized and other human scale streetscape features such as bicycle racks and lighting would be added to counteract the effect.

The adjacent structures on the east side of the north leg of Dewey Avenue that historically evolved along the edges of the existing intersection would no longer directly relate to the roadway in proximity or orientation. The terminating vistas for both the north and south approaches to the intersection from Dewey Avenue would be altered. Most buildings would remain, but the curvature of the roadway would be reinforced with the installation of street trees.

Remaining residual space not occupied by the realigned intersection and not occupied by new buildings or parking lots could be converted into landscaped areas or public open space. The community has voiced desires for the development of a pocket part supportive of formal and informal public events. After project completion, the resulting leftover public or open space would appear to be more than it is today given that it would be consolidated into fewer, larger areas. The installation of other streetscape features including colored, textured pavements and ornamental lighting fixtures would help to further enhance the neighborhood note and integrate it into the Maplewood Neighborhood.

4.2.14. Farmlands -

4.2.14.1. State Farmland and Agricultural Districts - The project is located in an urban area, and there are no Agricultural Districts in the vicinity of the project. Therefore no further review is required under Article 25-AA of the New York State Agricultural and Markets Law Section 305(4).

4.2.14.2. Federal Prime and Unique Farmland – This project would not involve the acquisition of any undeveloped property. Therefore, no further review is required under the Federal Farmland Protection Act.

4.2.15. Air Quality -

The project is located in Monroe County, which is in attainment for Carbon Monoxide (CO), particulate matter (PM_{2.5} and PM₁₀) and Ozone (O₃).

A Mesoscale Analysis is not required for this project since it is a localized intersection project which would not have regional impacts, would not significantly increase the vehicle miles travelled (VMT), and does not include HOV lanes or access controlled roadways. In addition, per Section 240.28 of 6NYCRR Part 240, intersection reconfiguration projects are exempt from regional emissions analysis requirements.

The project, being located within the City of Rochester, Monroe County, is a Former Sub Part 1 (Basic) area for 8-Hour Ozone. The project would realign the existing intersection and would reduce idle times and improve traffic flow for vehicles, pedestrians, bicycles, and mass transit. It is expected to reduce emissions of Carbon Monoxide (CO) and reduce emissions of Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NOx), which are precursors in the formation of Ozone. The expected reduction in Ozone precursors justifies the use of Congestion Mitigation and Air Quality (CMAQ) funds for this traffic flow improvement project.

The proposed reconfigured intersection for this analysis would maintain an overall Level of Service (LOS) of C or above for the Estimated Time of Completion (ETC), ETC+10 and ETC+20 time frames. This excludes the project from microscale air quality analysis, per the NYSDOT The Environmental Manual.

The project is listed in the Genesee Transportation Council Transportation Improvement Program (TIP) 2014-2017; however, since the project is located in an attainment area, it is not subject to federal or state conformity

4.2.16. Energy -

The proposed project is classified as a categorical exclusion and does not require an energy analysis since, by definition; it would not significantly impact energy utilization.

4.2.17. Noise -

4.2.17.1. Regulatory Framework - The purpose of a noise study is to determine potential future traffic noise impacts for the proposed Build Alternative 4 and the null Alternative. This section includes a summary of the noise analysis, impact determination, abatement evaluation and conclusions. Procedures for this study conform to the requirements developed by the Federal Highway Administration (FHWA) as presented in Chapter I of Title 23, Code of Federal Regulations, Part 772 (23 CFR 772), Procedures for Abatement of Highway Traffic Noise and Construction Noise, and the New York State Department of Transportation (NYSDOT) document The Environmental Manual (TEM). The procedures include the following:

- A. Review of existing activities,
- B. Determine the existing loudest hour traffic noise levels and predict future noise levels in the design year (2018) for alternative 4 within the study area,
- C. Determine locations where the recommended improvement project would cause a traffic noise impact,
- D. Evaluate and recommend noise abatement alternatives for areas with future traffic noise impacts to determine feasibility and reasonableness,
- E. Coordinate with local officials,
- F. Assess the potential construction noise expected from the project and determine measures that can be implemented to minimize or eliminate its adverse impacts on the community.

23 CFR 772 requires that noise studies be performed for Type I projects. A Type I project based upon 23CFR772.5, is defined as a project on new location, or a project with substantial changes in horizontal and/or vertical alignment, includes the addition of one or more through travel lanes, includes the addition of an auxiliary lane, or includes the addition or relocation of interchange lanes or roadways. This project consists of the realignment of the north leg of Dewey Avenue to meet the south leg of Dewey Avenue to form one intersection between Dewey Avenue and Driving Park Avenue instead of two intersections as in existing conditions. Due to the realignment, a Traffic Noise Assessment was completed.

4.2.17.2. Methodology - Noise abatement criteria (NAC) developed by the FHWA, define limits for determining impacts due to traffic noise levels in areas based on defined land use. These are

summarized in Exhibit 4.2.17.2. Federal regulations (23 CFR 772) define traffic noise impacts as "occurring when the predicted traffic noise levels approach or exceed the NAC, or when the predicted future loudest hour levels are substantially higher than the existing levels." In practice the NYSDOT definition of this regulation quantifies "approach" as within 1 dB(A), and "substantially higher" as 6 dB(A) or greater. Therefore, an impact is considered to occur if the predicted future noise level is one decibel lower, equals or exceeds the NAC, or is 6 dB(A) or more above the existing noise level. If an impact is identified, abatement measures for reducing or eliminating the impact must be considered.

EXHIBIT 4.2.17.2. FHWA NOISE ABATEMENT CRITERIA (NAC)		
Activity Category	Leq(h)	Activity Description
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Residential
C	67 (Exterior)	Active sport areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars and other developed lands, properties or activities not included in A-D or F.
F	---	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	---	Undeveloped lands that are not permitted

Reference: NYSDOT TEM 4.4.18.5.2.1 Table 1

The project area consists primarily of Category B "Residential" Land Use. A "place of worship" (Category D) is located on Dewey Avenue south of Driving Park. All other identified developed land uses do not include exterior use areas.

4.2.17.3. Existing Noise Levels - The existing conditions at the project site include the offset intersection of Dewey Avenue and Driving Park Avenue. The north and south legs of Dewey Avenue are offset by 180 feet and equipped with traffic signals to control flow. There are several mixed commercial and residential buildings in the project area. Operating Speeds range from 4 to 7 mph higher than the posted speed limit.

Existing traffic volumes and speeds generated for the Draft Design Report were used as input into the TNM 2.5 noise prediction model to determine the existing peak traffic noise levels in the project area. Best available mapping, aerial imagery, and survey data were also utilized in setting up the model geometry. The PM Hour traffic was modeled as the loudest hour due to the higher volume of vehicles during the PM rush hour. Existing noise levels at the receptors range from 49 dB(A) to 65 dB(A).

4.2.17.4. Predicted Future Noise Levels - The TNM 2.5 models representing future design year traffic conditions for the Null and Build Alternative 4 were developed. For Build Alternative 4, projected future design year peak hour traffic volumes, vehicle classifications, traffic flow controls, speeds, roadway geometry and land feature modifications were incorporated into the model. To determine whether or not noise abatement measures will be considered, future traffic noise levels for Build Alternative 4 were compared to levels approaching the NAC, and to the existing noise levels following the NYSDOT/FHWA guidelines in order to identify impacts. The results of these comparisons are also shown in Exhibit 4.2.17.4. – 1.

EXHIBIT 4.2.17.4. - 1 ALTERNATIVE 4 SUMMARY OF TRAFFIC NOISE LEVELS (Leq)								
Receiver Site	Location	FHWA Activity Category (NAC in dB(A))	Number of Dwelling Units	Existing Noise Levels (dB(A))	Predicted Future Noise Levels (dB(A))		Noise Level Differences (build - existing)	Impact ⁽¹⁾
					No Build	Build		
DEWEY / DRIVING PARK AVENUE INTERSECTION								
R1	305 Selye Terrace	B (67)	1	49	50	50	2	NO
R2	273 Selye Terrace	B (67)	2	54	55	56	2	NO
R3	267 – 271 Selye Terr.	B (67)	4	63	64	64	2	NO
R4	402 Driving Park Ave	B (67)	2	52	53	53	2	NO
R5	374 Driving Park Ave	B (67)	2	52	54	56	4	NO
R6	239 Selye Terrace	B (67)	4	62	63	63	1	NO
R7	310 Driving Park Ave.	B (67)	1	57	59	58	0	NO
R8	311 Driving Park Ave.	B (67)	2	65	66	66	1	YES
R9	25 Broezel Street	B (67)	2	60	61	60	0	NO
R10	“Place of Worship”	D (52) ⁽²⁾	1	44	45	45	1	NO

Notes:

- (1) An impact occurs if the preferred Build Alternative noise level is 6 dB(A) or greater than the existing level OR the noise level approaches or exceeds the NAC, where approach is 1 dB(A) below NAC of 67 dB(A) for Activity Category B.
- (2) Interior Noise Level Applies for NAC Category D.

For Build Alternative 4, the future Design Year (2018) traffic noise levels for the analysis sites range from 50 dB(A) to 66 dB(A). The greatest increase in traffic noise levels from existing conditions to Build Alternative 4 is 4 dB(A). Any noise level increase is attributed to the realignment of the highway and the projected increase in traffic volumes by the Design Year. The predicted future traffic noise levels approach the NAC established for Land Use Category B at one analysis site (2 dwelling unit receivers). For the remaining sites, the future predicted traffic noise levels do not approach or exceed the NAC established for Land Use Categories B, nor do they cause substantial increases of 6 dB(A) or greater over existing noise levels.

The noise receiver sites and the Build Alternative 4 roadway alignments are shown in Exhibit 4.2.17.4. – 2 of Appendix B. Exhibit 4.2.17.4. – 2 shows the Alternative 4 alignment from April 2014. The differences between this design and the current design are minor and will not result in any changes of received noise level.

4.2.17.5. Noise Abatement Summary - The FHWA's regulations contained in 23 CFR 772 and the NYSDOT Noise Analysis Policy and Procedures require the consideration of abatement measures, listed below, for all areas where traffic noise impacts are predicted to occur.

- (1) Traffic management measures such as traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive lane designations,
- (2) Alteration of horizontal and vertical alignments,
- (3) Construction of noise barriers.
- (4) Acquisition of real property or interests therein (predominately unimproved property) to serve as a buffer zone to preempt development which will be adversely impacted by traffic noise.
- (5) Noise insulation of publicly owned school buildings.

The only potential abatement alternative for construction is a noise barrier to reduce traffic noise levels, and this was reviewed for the impacted receptor R8. However, a noise barrier must be continuous along the length of a roadway to be deemed effective. Driveways, and cross streets along the roadway cause breaks (or gaps) in a noise barrier, which result in an ineffective noise abatement measure. A wall at this location would be a significant visual alteration to the neighborhood. The driveways and cross streets cannot be eliminated for this project, therefore, a noise barrier is not feasible.

4.2.17.6. Construction Noise - The noise produced on construction sites originates from a variety of sources, which can be described by identifying those phases of construction applicable to the recommended project. Specifically each phase of construction has its own scope, objective, mix of equipment, and therefore, its own noise characteristics. For most projects these phases overlap due to time constraints and interdependency of activities. The phases of construction typical to the subject project can be identified as: mobilization, earthwork, structures construction, drainage, base preparation, paving, (potential pile driving operations), and clean-up. The managing of construction activities to reduce the effects of construction noise on receptors can be achieved using an approach consisting of the following: design modifications; the reduction of noise emitted from equipment (source control); the abatement of noise escaping from the site (site control); and public relations.

4.2.17.7. Statement of Likelihood - Based on the studies performed, abatement is not recommended.

4.2.17.8. Coordination with Officials - The prevention of future traffic noise impacts (as discussed in 23CFR772.15) is made possible by providing information to local officials. The FHWA encourages local governments to use their powers to regulate land development in such a way that particularly noise sensitive land uses are either prohibited from being located adjacent to a highway or that developments are planned, designed, and constructed so that traffic noise impacts are minimized. As a result of this study, no additional information for local officials is being provided. However, noise compatible land use planning is provided in following references, which may be useful to local communities in protecting future land development from becoming incompatible with anticipated traffic noise levels.

"The Audible Landscape" www.fhwa.dot.gov/environment/audible/index.htm , and

"Entering the Quiet Zone" www.fhwa.gov/environment/noise/quietzone/index.htm

4.2.18. Asbestos -

An Asbestos Assessment was performed, which included a review of the utility records and a visual inspection of accessible materials. A Draft Technical Memorandum documenting this assessment is included in Appendix B. The assessment determined that several areas of potential Asbestos Containing Materials (ACM) exist and are recommended to be sampled. Should the Family Dollar building be demolished as part of the project, sixty (60) samples for suspect ACMs are recommended. Up to twelve (12) samples for suspect ACMs could be taken within the intersection of Dewey Avenue and Driving Park Avenue. No suspect ACMs were identified in the review of the utility plans. A visual inspection once excavation activities begin is recommended to verify the presence of suspect ACMs in underground utilities.

4.2.19. Hazardous Waste and Contaminated Materials -

A Hazardous Material Screening was conducted for the project area in accordance with the New York State Department of Transportation's *The Environmental Manual*, Chapter 4.4.20.5 "Contaminated Materials and Hazardous Substances – General Methodology: Analysis and Evaluation." This screening included an available record review and a project area walkover. The site visit was limited to a street side evaluation of the project area. An interior and a detailed exterior inspection of the *Family Dollar* was not completed for PCB caulk or hazardous materials. Upon receipt of authorization to enter the *Family Dollar* structure, a site visit can be completed and the report revised accordingly. The purpose of the screening was to identify potential areas of environmental concern that may be disturbed during construction of the proposed project. The following information provides a summary of the findings and recommendations of the Hazardous Waste Screening as discussed in the Technical memorandum (Appendix B).

Eleven sites were identified as having the potential to present an environmental concern to the proposed project. Three others were identified and dismissed as reasons for concern. Each site is listed in Exhibit 4.2.19 with the corresponding recommendation for further work.

Exhibit 4.2.19 Summary of Hazardous Waste Screening				
Site ID	Site address	Past/Current land use	Reason for concern	Recommendation(s)
Site 1	666 Driving Park Avenue	Past: DuPont E I De Nemours & Co Rochester Current: Vacant	Brownfield site	None
Site 2	375 Driving Park Avenue and 835 Dewey Avenue	Past: Dwelling/Store/ Historic dry cleaners Current: Grocery Store	Potential contaminated soils	Subsurface investigation
Site 3	374 Driving Park Avenue	Past: Auto repair & service Current: residential home	Potential contaminated soils	Subsurface investigation
Site 4	342 Driving Park Avenue	Past: Historic cleaners & dyers Current: Parking lot	Potential contaminated soils	Subsurface investigation
Site 5	340 Driving Park Avenue	Past: Historic dry cleaner Current: Parking lot	Potential contaminated soils	Subsurface investigation
Site 6	Dewey Avenue and Driving Park Avenue	Right of Way	Spill File	None

Exhibit 4.2.19 Summary of Hazardous Waste Screening				
Site ID	Site address	Past/Current land use	Reason for concern	Recommendation(s)
Site 7	329 Driving Park Avenue	Past: Historic wash & dry self-serve laundry Current: Retail stores	Potential contaminated soils	Subsurface investigation
Site 8	320 Driving Park Avenue	Past: Gas station/auto repair & service Current: Auto repair shop	Potential contaminated soils	Subsurface investigation
Site 9	308 Driving Park Avenue	Past: Auto garage Current: Barber shop	Potential contaminated soils	Subsurface investigation
Site 10	275 Driving Park Avenue	Past: Historic cleaners & dyers Current: Community Development Corporation	Potential contaminated soils	Subsurface investigation
Site 11	272 Driving Park Avenue	Past: Historic cleaners & dyers Current: Residential home	Potential contaminated soils	Subsurface investigation
Site 12	854 Dewey Avenue	Past: Historic filling station Current: Parking lot	Potential contaminated soils	Subsurface investigation
Site 13	818 Dewey Avenue	Past: Historic cleaners & dyers Current: Barber shop	Potential contaminated soils	Subsurface investigation
Site 14	Driving Park Bridge and Lake Avenue	Past: RG&E Genesee River Gorge	State Hazardous Waste Site	None

As with any environmental assessment completed without subsurface environmental testing, the possibility of unknown subsurface contamination exists. Should suspect materials be encountered during the course of project execution, appropriate measures should be taken to report such contamination, determine the nature and extent of any possible hazardous materials, and for proper management of such materials.

The following information indicates the findings of the Lead Paint Assessment as presented in the Technical Memorandum; Preliminary Asbestos and Lead Paint Assessment (Appendix B).

Family Dollar

The Family Dollar was reportedly constructed in 1995. No lead-based paint testing will be performed in the Family Dollar. OSHA 1926.62 applies to all construction work where an employee may be occupationally exposed to lead. Employees performing demolition operations must follow OSHA 1926.62.

Roads and Sidewalk

1. Yellow paint on posts and light pole base
2. Gray paint on light poles
3. Green paint on signal pole
4. Green paint on signal box
5. Various paints on traffic signs
6. Paint on bicycle racks

Up to approximately six (6) samples may could be taken on painted surfaces associated with the Dewey Avenue / Driving Park Avenue intersection project. Those samples would be analyzed for lead paint. OSHA 1926.62 must be adhered to for worker exposure.

4.3. Social

4.3.1. Socioeconomic Effects -

The proposed realignment could result in the potential relocation of the Family Dollar store located in the building in the northwest quadrant of the intersection. A conceptual stage relocation plan for this business is included in Appendix H. In summary, should Family Dollar need to relocate, there are numerous available buildings / parcels within the area. The Family Dollar store is not the only business of this type within the area. Other alternative service providers within walking distance include Price Rite in the southwest corner of Dewey Avenue and Driving Park Avenue and a Dollar General in the southeast corner of Driving Park Avenue and Lake Avenue. Throughout the public outreach process, as described in Chapter 1 and Appendix G, no formal comments were received on the potential relocation of the Family Dollar business. Relocation assistance would be provided in accordance with the requirements and standards of the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended (the "Uniform Act"). Therefore, the potential loss of this business would be of little to no effect on the local community.